THE
TICKER

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Studies in Tape Reading

By Rollo Tape

Author of "Powers Behind the Market," "The Machinery of Manipulation," &c.

VI. Market Technique

ON Saturday morning, February 27th, the market opened slightly higher than the previous night's close. Reading was the most active stock. After touching 123½ it slid off to 122½, at which point it invited short sales. This indication was emphasized at 122, at 121½ and again at 121. The downward trend was strongly marked until it struck 119⅞; then followed a quick rally of 1⅛ points.

This was a vicious three-point jab into a market which was only just recovering from the February break. What was its effect on the other principal stocks? Union Pacific declined only ¾, Southern Pacific ⅝ and Steel ⅝. This proved that they were technically strong; that is, they were in hands which could view with equanimity a three-point break in a leading issue. Had this drive occurred when Reading was around 145 and Union 185, the effect upon the others would probably have been very different.

In order to determine the extent of an ore body, miners use a diamond drill. This produces a core, the character of which shows what is beneath the surface. If it had been possible to have drilled into the market at the top of the recent rise, we should have found that the bulk of the floating supply in Steel, Reading and some others was held by a class of traders who buy heavily in booms and on bulges. These people operate with a comparatively small supply of margins, nerve and experience. They are exceedingly vulnerable, hence the stocks in which they operate suffer the greatest declines when the market receives a jar. The figures are interesting.

	——Points——		Per cent.
	1907-9 Advance.	Feb'y, '09 Break.	of break to adv.
Union Pacific	84⅞	12⅜	14.7
Reading	73⅞	26⅜	33.6
Steel	36⅞	16½	44.6

The above shows that the public was heavily extended in Steel, somewhat less loaded with Reading, and was carrying very little Union Pacific. In other words, Union showed technical strength by its resistance to pressure, whereas Reading and Steel offered little or no opposition to the decline.

Both the market as a whole and individual stocks are to be judged as much by what they do as what they do not do at critical points. If the big fellows who accumulated Union below 120 had distributed it above 180, the stock would have broken something like thirty points, owing to its having passed from strong to weak hands. As it did not have any such decline, but only a very small reaction, compared to its advance, the Tape Reader infers that Union is destined for much higher prices; that it offers comparative immunity from declines and a possible large advance in the near future.

This should not be taken as a prediction. Even were Union Pacific scheduled for a thirty-point rise in the next two weeks, something might happen to-morrow to postpone the campaign for a considerable time. But the

Reading Co	
1700....	123
200....	123 1/8
500....	123
800....	122 7/8
1300....	123
500....	123 1/8
1900....	123 1/4
1500....	123 1/8
200....	123 1/4
400....	123 1/8
1100....	123
1200....	123 1/8
300....	122 7/8
1500....	122 3/4
1400....	122 5/8
4200....	122 1/2
300....	122 5/8
3000....	122 1/2
200....	122 5/8
700....	122 1/2
100....	122 3/8
2000....	122 3/8
800....	122 1/2
200....	122 3/8
100....	122 1/4
600....	122
100....	122 1/8
800....	122 1/4
100....	122 3/8
300....	122 1/2
800....	122 3/8
700....	122 1/4
1200....	122 1/8
100....	122 1/4
100....	122 1/8
100....	122 1/4
100....	122 3/8
2100....	122 1/4
400....	122
800....	122 1/8
800....	122 1/4
200....	122 1/8
1500....	122
200....	122 1/8
100....	122
1900....	122 1/8
1600....	122
100....	122 1/8
500....	122
100....	121 7/8
1500....	122
300....	121 7/8
500....	121 3/4
1500....	121 7/8
2100....	121 3/4
300....	121 5/8
2000....	121 1/2
11 A M	
1700....	121 1/4
200....	121 3/8
600....	121 1/4
100....	121 3/8
3700....	121 1/4
100.sld	121 1/8
800....	121 3/8
400....	121 1/4
1400....	121 1/2
200....	121 3/8
400....	121 1/4
1100....	121
100....	120 7/8
100....	121
700....	120 7/8
1400....	120 5/8
700....	120 1/2
700....	120 5/8
1400....	120 3/4
100....	120 5/8
900....	120 1/2
2000....	120 1/4
100....	120 3/8
500....	120 1/4
500....	120 3/8
1600....	120 1/2
800....	120 3/8
600....	120 1/4
400....	120 3/8
300....	120 1/4
800....	120 1/8
200....	120 3/8
100....	120 1/2
1300....	120 3/8
1600....	120 1/2
600....	120 3/8
700....	120 1/4
2000....	120
100....	120 1/8
1800....	120
100....	119 7/8
200....	120
200....	120 1/8
300....	120
1000....	120 1/8
1700....	119 7/8
200....	120
100....	119 7/8
1600....	120
1100....	120 1/8
600....	120 1/2
200....	120 5/8
800....	120 7/8
1200....	121
100....	120 7/8
100....	120 3/4
600....	120 7/8
1000....	121
700....	121 1/4
400....	121 1/8
900....	121 1/4
400....	121 3/8
700....	121 1/4
1000....	121 1/8
600....	121
1000....	121 1/4
1100....	121 3/8
1000....	121 1/4
700....	121 3/8
100....	121 1/2
200....	121 5/8
300....	121 3/8
1200....	121 1/2
500....	121 5/8
1500....	121 3/4
1200....	121 7/8
800....	121 3/4
200....	121 5/8
800....	121 1/2

Union Pacific Ry	
1500....	177
800....	176 7/8
4900....	177
700....	176 7/8
700....	177
600....	176 7/8
500....	177
1500....	177 1/8
1200....	177 1/4
1200....	177 3/8
200....	177 1/4
600....	177 3/8
300....	177 1/4
1100....	177 3/8
900....	177 1/2
2400....	177 3/8
200....	177 1/4
100....	177 3/8
700....	177 1/4
500....	177 3/8
1300....	177 1/4
200....	177 3/8
1200....	177 1/4
1700....	177 3/8
2000....	177 1/4
200....	177 1/8
1200....	177 1/4
300....	177 3/8
100....	177 1/2
300....	177 3/8
700....	177 1/4
1100....	177 3/8
1600....	177 1/2
300....	177 3/8
900....	177 1/4
100....	177 3/8
100....	177 1/4
600....	177 1/8
1300....	177 1/4
700....	177 1/8
11 A M	
100....	177
3900....	177 1/8
1200....	177
1500....	176 7/8
200....	176 3/4
1300....	176 7/8
700....	177
100....	176 7/8
6300....	176 3/4
1100....	176 7/8
200....	177
4400....	176 7/8
1600....	177
100....	176 7/8
1300....	177
200....	177 1/8
200....	177
1900....	177 1/8
500....	177 1/4
1400....	177 1/8

Southern Pacific	
800....	117 1/4
400....	117 1/8
200....	117 1/4
1800....	117 3/8
400....	117 1/4
200....	117 3/8
100....	117 1/2
1100....	117 3/8
200....	117 1/4
300....	117 3/8
400....	117 1/4
200....	117 1/8
100....	117 1/4
200....	117 1/8
100....	117 3/8
600....	117 1/4
20....	117 3/8
600....	117 3/8
100....	117 1/4
500....	117 1/8
200....	117
100....	117 1/8
400....	117
300....	117 1/8
100....	117
11 A M	
300....	116 7/8
400....	117
500....	116 7/8
400....	117
100....	116 7/8
100....	116 3/4
1400....	116 7/8
100....	116 3/4
100....	116 7/8
100....	116 3/4
100....	116 7/8
900....	116 3/4
700....	116 7/8
200....	116 3/4
400....	116 7/8
400....	117

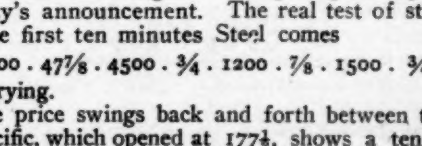
Un States Steel	
3000...	44 1/2 44 5/8
9100......	44 5/8
2000......	44 3/4
2700......	44 5/8
3500......	44 3/4
400.sld..	44 1/2
600......	44 3/4
700......	44 5/8
100......	44 3/4
200......	44 5/8
300......	44 3/4
100......	44 5/8
2000......	44 3/4
900......	44 5/8
100......	44 3/4
1400......	44 5/8
600......	44 1/2
1800......	44 5/8
2800......	44 1/2
500......	44 5/8
100......	44 1/2
1700......	44 5/8
1500......	44 1/2
900......	44 5/8
1400......	44 1/2
1600......	44 3/8
2100......	44 1/4
11 A M	
6300......	44 1/4
500.sld..	44 3/8
1900......	44 1/4
200......	44 1/8
700......	44 1/4
100......	44 1/8
1200......	44 1/4
1100......	44 1/8
2500......	44 1/4
2500......	44 1/8
3000......	44 1/4
3200......	44 3/8
500......	44 1/2
100......	44 3/8

A Three Point Break in Reading which had little effect upon the other leaders, proving the market technically strong.

Tape Reader must work with these, broader considerations in full view. He has just so much time and capital and this must be employed where it will yield the greatest results. If by watching for the most favorable opportunities he can operate with the trend in a stock which will some day or week show him 10 points profit over any other issue he could have chosen, he is increasing his chances to that extent.

A long advance or decline usually culminates in a wide, quick movement in the leaders. Take the break of February 23d last: Reading declined from 128¾ to 118 and Steel from 46 to 41¼ in one day. Southern Pacific, after creeping up last fall from 97 to 112, reached a climax in a seven-point jump during one session. Instances are so numerous that they are hardly worth citing. The same thing happens in the market as a whole—an exceptionally violent movement, after a protracted sag or rise, usually indicates its culmination.

A stock generally shows the tape reader what it proposes to do by its action under pressure or stimulation. For example: On Friday, February 19th, 1909, the United States Steel Corporation announced an open market in steel products. The news was out. Everybody in the country knew it by the following morning. The Tape Reader, in weighing the situation before the next day's opening, would reason: "As the news is public property, the normal thing for Steel and the market to do is to rally. Steel closed last night at 48⅜. The market hinges upon this one stock. Let's see how it acts."

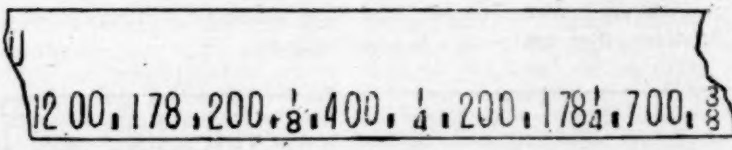


This is ¾ down from last night's closing—a perfectly natural occurrence in view of yesterday's announcement. The real test of strength or weakness will follow. For the first ten minutes Steel comes

2000 . 47⅞ . 4500 . ¾ . 1200 . ⅞ . 1500 . ¾

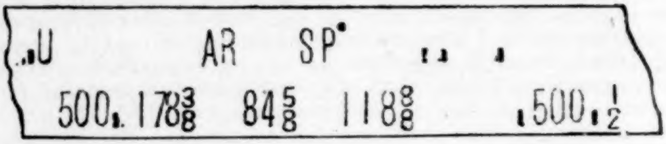
without otherwise varying.

Eighteen times the price swings back and forth between the same fractions. Meantime, Union Pacific, which opened at 177½, shows a tendency to rally and pull the rest of the market up behind it.

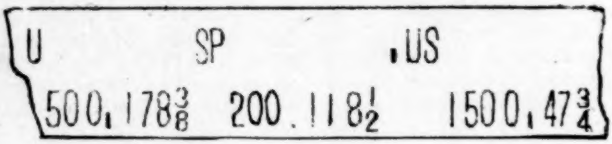


Can Union lift Steel? That is the question. Here are two opposing forces, and the Tape Reader watches like a hawk, for he is going with the mar-

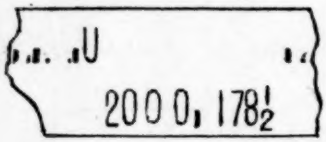
ket—in the direction of the trend. Union is up ⅞ from the opening and Southern Pacific is reinforcing it.



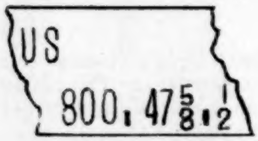
But Steel does not respond. Not once does it get out of that ¾-⅞ rut—not even a single hundred shares sells at 48. This proves that it is freely offered at 47⅞ and that it possesses no rallying power, in spite of the leadership displayed by the Harrimans.



Union makes a final effort to induce a following,

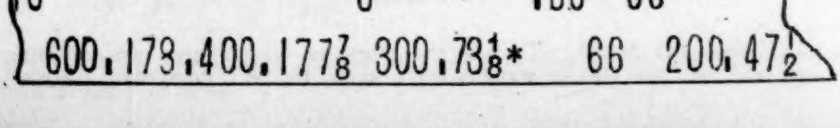


to which Steel replies by breaking through with a thud.

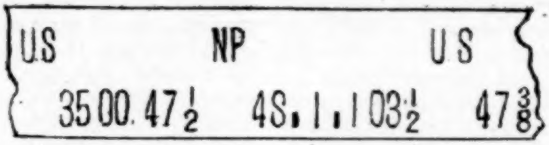


This is the Tape Reader's cue to go short. In an instant he has put out a line of Steel for which he gets 47½ or 47⅜, as there are large volumes traded in at those figures.

Union Pacific is disheartened. The Steel millstone is hanging round its neck. It slides off to 178¾ . ¼ . ⅛ and finally to



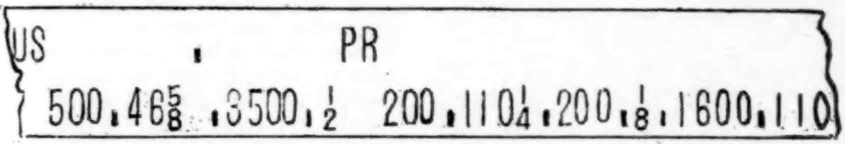
The pressure on Steel increases at the low level.



Successive sales are made, as follows:

6800 . 47½ . 2600 . ⅜ . 500 . ¼ . 8800 . ⅛

From this time on there is a steady flow of long stock. Reading and Pennsylvania are the weakest railroads. Colorado Fuel breaks 7 points in a running decline and the other steel stocks follow suit. U. S. Steel is dumped in bunches at the bid prices, and even the dignified preferred is sympathetically affected.



The market closes at the bottom, with Steel at 46, leaving thousands of stockholders of Steel in a thoroughly frightened state, their accounts weakened by the decline and a holiday ahead for them to worry over.

It looks to the Tape Reader as though the stock would go lower on the following Tuesday. At any rate, no covering indication has appeared, and unless it is his invariable rule to close every trade each day, he puts a stop at 47 on his short Steel and goes his way. (His original stop was 48⅛.)

Steel opens on the following session at 44¾@½, and during the day makes 41¼.

There are a number of lessons to be drawn from this episode. The market is a tug-o'-war. Successful tape reading requires ability to judge which side has the greatest pulling power and one must have the courage to go with that side. There are critical points which occur in each swing, just as in the life of a business or of an individual. At these junctures, it seems as though a feather's weight on either side would determine the immediate trend. Any one who can spot these points has everything to win and little to lose, for he can always play with a stop placed close behind the turning point or point of resistance.

If Union had continued in its upward course, gaining in power, volume and influence as it progressed, the dire effects of the Steel situation might have been vitiated. It was simply a question of pulling power, and Steel pulled Union down.

This study of responses is one of the most valuable in the Tape Reader's education. It is an almost unerring guide to the technical position of the market. Of course, all responses are not clearly defined. It is a matter of indifference to the Tape Reader as to who or what produces these tests, or critical periods. They constantly appear and disappear; he must make his diagnosis and act accordingly. If a stock is being manipulated higher, the movement will seldom be continued unless other stocks follow and support the advance. If the public is in control of a stock, the other issues should be watched to see whether large operators are unloading on the strong spots. Should a stock fail to break on bad news, it means that

insiders have anticipated the decline and stand ready to buy.

A member of a syndicate once said to me:

"We are going to dissolve to-morrow."

"Will there not be considerable selling by people who don't want to carry their share of the securities?" I asked.

"Well," he replied, "we know how every one stands. Probably 10,000 shares will come on the market from a few members who are obliged to sell, and as a few of us have sold that much short in anticipation, we'll be there to buy it when the time comes."

This reminds us that it is well to consider the insider's probable attitude on a stock. The tape usually indicates what this is. One of the muck-raking magazines recently showed that Rock Island preferred had been driven down to 28 last August, to the accompaniment of receivership rumors. The writer of the article was unable to prove that these rumors originated with the insiders, but states that the transactions at this time were inscrutable. Perhaps they were inscrutable to a person inexperienced in tape reading, but we well remember that the indications were all in favor of buying the stock; the transactions were very large—out of all proportion to the capital stock outstanding and the floating supply. What did this mean to the Tape Reader? Thousands of shares of stock were traded in per day, after a ten-point decline and a small rally. If the volume of sales represented long stock, some one was there to buy it. If there was manipulation it certainly was not for the purpose of distributing the stock at such a low level. So, by casting out the unlikely factors, we arrived at the correct conclusion. We state this advisedly, because we stood at the ticker and reasoned the situation out at the time.

The market is being put to the test continually by one element of which little has been said, viz., the floor traders. These shrewd fellows are always on the alert to ferret out a weak spot in the market, for they love the short side. Lack of support, if detected, in an issue generally leads to a raid which if the technical situation is weak spreads to other parts of the floor and produces a reaction or a slump all around. Or, if they find a vulnerable short interest, they are quick to bid up a stock and drive the shorts to cover. With these and other operations going on all the time, the Tape Reader who is at all expert is seldom at a loss to know on which side his best chances lie. Other people are doing for him what he would do himself if he were all-powerful.

While it is the smaller swings that interest him most, the Tape Reader must not fail to keep his bearings in relation to the broader movements of the market. When a panic prevails he recognizes in it the birth of a bull market and operates with the certainty that prices will gradually rise until a boom marks the other extreme of the swing. In a bull market he considers reactions of from 2 to 5 points normal and reasonable; he looks for occasional drops of 10 to 15 points in the leaders, with a 25-point break at least once a year. When any of these occur, he knows what to look for next.

In a bull market he expects a drop of 10 points to be followed by a recovery of at least half the decline, and if the rise is to continue, all of the drop and more will be recovered. If a stock or the market refuses to rally naturally, he knows that the trouble has not been overcome, and therefore looks for a further decline.

Take American Smelters, which made a top at 99⅝ last November, then slumped off under rumors of competition until it reached 78. Covering indications appeared around 79½. Had the operator also gone long here, he could confidently have expected Smelters to rally to 88¾. The decline having been 21⅝ points, there was a rally of 10¾ points due. As a matter of record the stock did recover to 89⅛.

Of course, these things are mere guide posts, as the Tape Reader's actual trading is done only on the most positive and promising indications; but they are valuable in teaching him what to avoid. For instance, he would be wary about making an initial short sale of Smelters after a 15-point break, even

if his indications were clear. There might be several points more on the short side, but he would realize that every point further decline would bring him closer to the turning point, and after such a violent break the safest money was on the long side.

Another instance: Reading sold on January 4th, 1909, at 144$\frac{3}{8}$. By the end of the month it touched 131$\frac{1}{2}$, and on February 23d broke ten points to 118. This was a decline of 24$\frac{3}{8}$ points, allowing for the 2 per cent. dividend. As previously stated, the stock looked like an attractive short sale, not only on the first breakdown, but on the final drive. The conservative trader would have waited for a buying indication, as there would have been less risk on the long side. The element of safety is as important as any other.

It is seldom that the market runs more than three or four consecutive days in one direction without a reaction; hence the Tape Reader, if long, must realize that his chances decrease as the swing is prolonged.

The daily movements offer his best opportunities; but he must keep in stocks which swing wide enough to enable him to grab a profit.

It is an astonishing fact, and one which we have never before seen in print, that there is a market cycle which runs almost exactly one hour.

Watch it for yourself when next at the ticker, and you will find that if an upward movement culminates at 10:25 the reaction usually will last till 10:55, and the apex of the next upswing will occur about thirty minutes later. I have actually stood watch in hand having decided what to do, waiting for the high or low moment on which to sell or buy, and have often hit within a fraction of the best obtainable figure. Why this is I do not attempt to explain, but it happens more often than not.

I have frequently used this idea as a test of the market's strength or weakness, in this way: If a decline ended at a certain moment and the subsequent rally only lasted ten minutes, instead of the normal half hour, I would consider it an indication of weakness and would look for a further decline.

This is valuable more as a check on over-anxiety to act, as it gives a definite point at which commitments may be made to greatest advantage. As Napoleon said: "The adroit man profits by everything, neglects nothing which may increase his chances."

I once knew a speculator who bought and sold by the clock. He had no idea of the hourly swing, but would buy at 12 o'clock, because it was 12 o'clock, and would sell at 2 o'clock, for the same reason.

The methods employed by the average outside speculator are not so very much of an improvement on this, which explains why so many lose their money.

The expert Tape Reader is diametrically opposed to such people and their methods.

He applies science and skill in his angling for profits.

He studies, figures, analyzes and deduces. He knows exactly where he stands, what he is doing and why.

Few people are willing to go to the very bottom of things. Is it any wonder that success is for the few?

(Continued in the May TICKER.)

A Talk on Municipals--II

By Arthur M. Harris*

of N. W. Harris & Co.

HAVING considered the character of a municipal security, it may be well to look into the subject from the standpoint of marketing.

First we will look into its marketing by the municipality itself. The municipality advertises for bids. Usually these bids must be submitted sealed, although in some cases issues are sold at public auction. In the case of villages in this State a peculiar bid is required. For example, if they are going to do some work which requires the expenditure of $50,000, we will say, instead of the law leaving a loop-hole so that the officials can made a contract for $50,000, and issue $50,000 of 4½ or 5 per cent. bonds which would bring five, six, seven, eight, ten or twelve per cent. premium, the law requires the village to offer its bonds to the bidder offering to take the bonds at par and bearing the lowest rate of interest. You will, therefore, find village bonds in New York State bearing all sorts of odd rates, not running in regular quarters and halves but showing the effect of close competitive bidding.

Bonds, as a rule, under the law cannot be sold below bar. There are, however, ways of evading this restriction. For example: A municipality finds it absolutely essential to issue bonds and the law forbids a higher rate than say four per cent. The market at that time will not take a four per cent. bond at par. In such a case, provided the discount is not too large, a municipality may agree to pay the attorney's fees for passing upon the legality of the issue, or it may agree to pay what would appear to be an unreasonable amount for the blank bonds. Then the purchasers pay par for the bonds, getting back the difference between what the bonds are actually worth and par in the amount paid out for the blank bonds and attorney's fees, which items are charged by the city to expenses.

If we take the history of the sale of municipal securities we find, without going back a great many years, a time when there were comparatively few bidders. There were simply no houses making a specialty of municipal securities, and they were sold very largely to investors direct. Few issues were sold to speculators, although they were more attractive to speculators in the early days than they are now, for the reason that they bore a high rate of interest, and frequently sold at a big discount so that the long-headed speculator knew that by buying the bonds he could eventually get a much higher price for them.

I remember a president of one of the largest savings banks in the West saying to me a number of years ago, "This plan of offering to our bank municipal securities accompanied by an opinion to the effect that the bonds are legal in every respect is something comparatively new. I can remember when we used to buy quantities of municipal bonds and never thought of looking into the legality. We took them simply because they were offered, and assumed of course that they must be legal."

The result of the limited market in the early days was that the municipalities had to pay a very high rate of interest. If we trace the growth of the sale of municipal bonds we find that different banking houses began to make municipal bonds a specialty, and we find that these houses sent trained representatives out to look into the situation and report the conditions back to their principals, after which the bid was submitted. We also find that banks began to employ expert counsel to pass upon a given issue of bonds before paying for them. We find that banking houses began to insert in their bids a clause something to this

*Address delivered at Y. M. C. A., West 57th Street, N. Y., Dec. 9th, 1908; Course in Banking and Investments.

effect: "Certified transcript of proceedings satisfactorily evidencing to our attorney as to legality and purpose of issue to be furnished us prior to delivery and payment for the said bonds."

Not every lawyer's opinion as to the legality of an issue will satisfy a conservative banking house. He must be an expert in that line. As the title guarantee company employs lawyers expert in real estate law and the corporation those versed in corporation law, so the municipal bond house employs lawyers trained in investigating the legality of the issue of bonds it is proposed to purchase.

You will find often that some of the larger cities submit to some prominent counsel a full transcript of all of their proceedings for the purpose of having the legality passed upon and approved before bonds are offered for sale, then advertising that Judge Dillion's opinion, for instance, will be furnished to the successful bidder. You also find banking houses, on important issues, securing this transcript of proceedings and submitting it to their attorney for approval before they make their bid, or else at the time of the bid, making it absolutely under the condition that such proceedings are furnished and that the legality of the issue is approved by their own attorney. New York city is the only prominent exception to this rule. New York city advertise its bonds for sale. It has the right, as municipalities always have, to reject any or all bids, and if a bidder expects to secure any of the bonds offered by New York he must put in his bid that he will pay so much, and leave out all conditions. He will not be furnished with any transcript of the proceedings certifying to and evidencing the legality of the issue. He must take them as they are offered. If he puts in any condition his bid will be rejected.

Who are buying municipal securities to-day, generally speaking? The very large bulk of them are bought by bankers who make the handling of municipal bonds a specialty. In other words, the municipal bond house is a retailer of bonds; it buys them in bulk and sells them to investors in small amounts. They are sold to private investors, savings banks, trust companies, estates, and to national banks since the new law, passed at the last session of Congress, making it legal for the Secretary of the Treasury to accept as security for public deposits bonds issued by municipalities which have not defaulted in the payment of interest or principal for a period of ten years.

Why does the private investor buy municipal bonds? Why do executors and administrators of estates buy municipal bonds? For their absolute security—that is the principal reason. They know that under the law all of the property in any municipality must be taxed. They know that they can go into a Court and have a mandamus issued compelling the levying of taxes if the officers have failed to do so. They know that the officials are obliged to levy a tax sufficient to pay their interest and principal at maturity. Bear in mind, also, that a municipal security has a lien ahead of every other security that you can name. You may own a farm mortgage in any county, you may own a mortgage on a piece of property in the City of Orange, N. J., but you cannot transfer it with a clear title, unless all the taxes which are due have been paid. A railroad may own miles of tracks in a county, it may own its shops, it may own its freight houses and depots, but it must first provide for the payment of taxes due in that county before making any provision for the payment of interest on their first mortgage bonds. Therefore, you have as near absolute security in a municipal bond as it is possible to get. The old expression is: Municipal securities are as safe as Governments.

Then again private investors, executors and administrators of estates buy municipal bonds for the reason that very often they are not taxable. In New York State a municipal bond is not now taxable. The law excepts school districts, however, because of a mistake in drawing the bill probably. I think it was intended to include school districts, but in any event, as the law stands, a school district is not exempt.

Why do savings banks buy municipal bonds? A savings bank buys municipal securities, first (if they have bought them from choice), on account of the security—for the same reason as the

private investor. In the Eastern States the laws covering the investment of funds by savings banks provide that they may be invested in municipal securities, although the laws vary in their details. In New York the laws are very rigid. You do not have to go back very many years to the time when the savings banks in New York could invest in municipal bonds issued in the State of New York only. They could not buy City of Chicago, St. Louis, Philadelphia, or Boston bonds at fifty cents on the dollar, if they had been offered, because it was not legal for them to invest their funds in that way. It was not until a comparatively few years ago that the law was broadened, permitting the savings banks in New York to go outside of this state in the purchase of municipal bonds, such as the bonds of Detroit, St. Louis, Philadelphia, Boston and some other cities. It was not until 1898 that the savings banks in New York could buy a railroad bond at all.

The savings bank laws of Massachusetts are even more rigid than those of New York. In order that a bond may be legal for savings banks in Massachusetts, it must not have a debt to exceed five per cent. of assessed valuation, while in New York it is seven per cent. You will find that all of the states in the East, in their laws covering investments of the funds of savings banks, make provision for the investment of municipal securities with various restrictions, such as the population of the city, the percentage of debt to assessed valuation, and the fact that they must never have defaulted in the payment of their interest.

In some of the states the laws permit, in arriving at the net debt, a deduction of the municipal debt created for water purposes, and also a deduction in the amount of money in the sinking fund. They do that on the theory that waterworks are self-sustaining, and they are justified in deducting the balance in the sinking fund which is set aside for the purpose of reducing the debt.

A dealer in buying a municipal bond will naturally consider the record of the place, population, financial condition, the debt limit if any, and the tax limit if any, the purpose of the issue, the rate of interest, where the bonds and the interest are made payable—whether in New York or "at home," as we say—the time to run, the price they will bring, and the market—that is, whether it has a limited market like the Massachusetts savings banks market, or whether it has a broader market that would allow them to sell the bonds to any of the savings banks, or whether it is a private investors' security. There comes in the question of supply and demand. The smaller the supply and the greater the demand, the higher the price.

The character of the place is also of importance. An investor will not ordinarily care to buy the security of a town which is, as we say, a one-industry town. This consideration applies particularly to small mining towns. Agriculture is always a dependable resource, but a mine may give out and the inhabitants of the town move away.

Some investors even go so far as to consider the danger in case of war. A woman came into our office one time and wanted to buy a municipal bond. We offered a bond of the City of Boston.

"No," she said, "I would not buy that bond, for a navy might come up into the harbor and blow Boston off the face of the earth." She took a bond of a town out in Kansas and was satisfied.

Then, again, if you take too small a town you may find yourself in the position of the parties who, a number of years ago bought bonds—as I remember the amount was $5,000—of a very small town in Kansas. This town was situated along the bank of a small stream. The bonds were sold and the money paid over, and then the town simply moved all of the buildings over to the other side of the stream, leaving neither officials nor town organization. They even changed the name of the town, and the only thing that was left was the old town site, and that was not worth at that time the amount of the bonds.

I have spoken of the fact that to-day the municipal bond house sends out its trained representatives to make investigations and report conditions. The report is valuable also in selling the securities. You will readily appreciate that if you are offering securities to an investor, and are able to give him information first-hand from your rep-

resentative who has been there and found out what the conditions are, you can satisfy him much more readily.

Bonds are issued in two forms. As a rule municipal bonds are issued in coupon form but some of them are issued in registered form. The advantage of a coupon bond over a registered bond is its negotiability. It passes by delivery the same as a ten dollar bill. A registered bond is safer, in this respect: If the holder has not a safe-deposit box convenient and must keep the bond in his stocking or under the mattress, if it is registered and some thief comes in and steals it, it is then valueless to the thief. There is this to be said further of a registered bond; viz., when the interest matures a check for the interest is mailed direct to the registered holder; whereas if a man holds a bond like that (the speaker here exhibited a municipal bond—coupon) he must cut a coupon off every six months and deposit it in his bank or go and collect it.

As I look at this I am reminded of an incident that occurred some years ago, when a man sent in a bond like this with one coupon down here. (The speaker here indicated the lower corner of the bond.) They used to make many of their bonds with the coupon at the bottom instead of at the side. He sent in this letter with this coupon attached, and he said, "I send you this coupon for collection. I do not know that the heading is worth anything. You can do what you please with that."

During the reconstruction period after the War, many millions of "Railroad Aid Bonds" were issued by different southern states and western municipalities, and later those bonds were defaulted upon in the payment of interest and principal, and as they were issued for illegitimate municipal purposes their payment could not be enforced. The West and the South have not been alone in the matter of default. Perhaps you are all familiar with the default in Elizabeth, N. J., and the default in Rahway. In the case of Elizabeth there was no limit of debt, and they improved streets out into the outskirts. They ran up a tremendous debt, were unable to pay, and had to compromise with the bondholders.

There have also been temporary defaults. I think that under the new law, which provides for the deposit of municipals with the Secretary of the Treasury to secure public deposits, we will have fewer temporary defaults than heretofore. Temporary defaults are frequently due to the fact that officials in a small place forget or neglect to make a levy, and of course there would then be no funds on hand with which to redeem the bonds. There have been, however, special causes for defaults, for instance, in the cases of certain municipalities in the State of Alabama, the City of Galveston, Austin, Middlesboro, Ky., Lexington, Tenn.

I mentioned awhile ago the term "tax limit." In some states, particularly in the South, there is what is known as a tax limit under the law, that is a given municipality is limited in the amount of taxes which it can levy for specific purposes. In Alabama, during a time of financial depression and failure in business, assessed values dropped very materially in many of the municipalities. Under the law they were limited as to the amount—that is the percentage of tax—on the assessed valuation which they could levy for the payment of interest. You will readily see that if a municipality has outstanding a debt, such as the State of Texas, of one per cent., on its assessed valuation, and if the assessment as it stands to-day will just take care of the interest, if you cut that assessment in half, you can only pay half of your interest. This will explain what the trouble was in Alabama. By means of remedial legislation much good was accomplished; still further improvements are needed in that line.

In Galveston, at the time of the great tidal wave, a vast amount of damage was done and property destroyed. The city found itself in a position where it was absolutely impossible to pay interest at the rate which the bonds bore; therefore a compromise was made. The bond holders accepted a reduction in interest to 2½ per cent, for a period of a few years, at which time the city agreed to resume interest at the former rate. The time expired and the city is now paying its full interest. That was a case of proper action on the part of the bond

holders. Of course, the circumstances surrounding the default must determine what action is to be taken. It may be best to vote for a compromise on the principle of good horse sense. Such was the case with Galveston.

The North Carolina case was a peculiar one. The state refused to pay interest on bonds which had been issued in aid of a North Carolina Railroad. You will bear in mind that an individual cannot sue a state; a sovereign state can, however. Subsequently, a party owning a block of North Carolina bonds, gave them to the South Dakota School fund. The State of South Dakota instituted suit and secured a judgment of $27,400. North Carolina, fearing it might have to pay a very large amount of money, made a compromise with the other bond holders, and issued $250,000 of bonds, taking up the old ones.

The result of the increased number of banks making a specialty of municipal securities is that the market has been very largely extended. Banks have introduced municipal securities to investors, pointed out their good qualities and the result is the interest rate is lower and the market broader.

The total amount of municipals outstanding to-day, as near as I am able to ascertain the figures, is probably in the neighborhood of $2,811,000,000. While railroads are issuing millions and corporations are issuing millions, there is also, as you see, a very large amount of these ultra-conservative securities, known as municipal bonds, in the hands of different classes of investors throughout this country and Europe.

In Favor Of Unrestricted Trading

DEAN JOHNSON, of the School of Commerce and Finance of the University of the City of New York, who is regarded as a very high authority on such subjects, says that, in his opinion, 90 per cent. of the results of speculation in this country are beneficial, broadly considered, and only 10 per cent. detrimental.

"On the general proposition, I cannot see how the legislature can prevent a man from buying a horse to be delivered next week or from selling a horse for delivery next week, so long as no fraud attaches to the transaction. Nor do I see how the legislature can prevent a man from making a purchase 25 per cent. for cash and 75 per cent. on credit. That is the way in which every merchant and every manufacturer finances his business, depending upon the fulfilment of his judgment of the season's trade to make good his purchases at the beginning of the year. The 'middleman' in mercantile business comes into closer correspondence with the stock market trader. He buys not at all with the intention of distributing to the consumer, but for the purpose of selling again, and at an advance over what he paid. What such a trader does in one line on a small scale, the stock market operator does in many lines on a very large scale; and if you legislate against the extension of credit that we call dealing on margin in the one instance, you ought logically to do the same in the other.

"I doubt, furthermore, whether it would be constitutional thus to limit the freedom of contract, unless under the general welfare clause, but that is a question for the lawyers. The economic considerations are sufficient, in any event, to abundantly justify an unrestricted opportunity for trading.

Self-Analysis

DID you ever stop to think that there are two of you?

I will prove it.

Hold your hand out in front of your face and say to the hand, "move."

It won't move. But when you really wish it to move, you don't have to say, or even think anything. It moves.

It is this Inner Man who is your real master. Make all the resolutions you like; they won't stand for much when this Inner Self gets to working on your emotions.

The strongest impulses which come to traders in the stock market are those occasioned by fear. But fear is only one of the many sensations experienced by the operator; in fact, he runs the whole gauntlet of emotions while operating and as a rule is happiest when his trade is closed, whether at a profit or a loss. This don't prevent his getting into another trade immediately, and while this one is "on" he fingers the tape with thrills running through him and beads of cold perspiration standing all over him.

It is well to analyze yourself not only before you go into stock speculation, but at various points along the line. It is well to strike a balance occasionally and see where you and your Inner Self stand.

George Arliss in "The Devil," starts to straighten out a badly mixed situation by remarking, "Let's clear the air." It's a good plan for men and other devils.

Following are a few questions which I have found it necessary for me to ask myself at times, especially after a series of more or less successful plunges:

Am I overtrading?

What method am I following?

Am I operating in the right stocks?

Am I a bull in a bull market or *vice versa?*

Am I tape reading, playing tips or just guessing?

Can I conscientiously devote my time and attention to the market without neglecting something else more important?

Is my mind thoroughly clear?

Do I know where I am at and exactly what I am doing?

Am I making progress in my trading?

Can I afford to risk the money?

There are dozens of other questions that will come to anyone who will sit down and tear himself to pieces. In a great many instances he will find that he is using no method, no stop orders, is running unwarranted risks and has developed little judgment of his own.

A common expression around the ticker is, "I wouldn't buy that stock with counterfeit money," and yet, a close analysis of the situation and the relation of that particular stock might show it to be the very issue which was the most desirable purchase or sale.

A host of people jump in and out of the market on the opinions of others. One trader will say to another:

"What do you think of Union?"

The reply will be:

"I don't like it."

The same question will be addressed to another, and the answer being, "I think it's a sale," the trader will go short a hundred shares because the second man's opinion confirmed that of the first. So three people have a hand in generating this transaction without scarcely a moment's real consideration being given by all of them combined. If it is a 500 share transaction, $90,000 is involved on a basis of unadulterated hot air.

When a man asks your opinion he acknowledges that he has no confidence in his own judgment. Those who have judgment and exercise it don't need to

solicit the ideas of others. People who beg and borrow ideas would not think of wearing another man's hat which cost $5, but they will gladly jam his opinion down over their ears and jump into stocks costing as much as a row of apartment houses.

After making a trade on some other fellow's advice, we frequently find traders asking still other opinions. Having made their commitments, they will not accept any but those which coincide with the previous ones, provided the stock goes their way. They then become very cocky just as though they had thought it all out themselves.

But if the venture runs against them for a few points they will be trotting all over the office to learn what the rest of the audience thinks. This is a sign of increasing fear and all it needs to make the speculator jump his trade is a few opinions on the other side.

This is a genus Lamb in his natural state and most frivolous mood. There is another brand of Lamb which becomes obstinate as soon as a commitment is made. To him a three point loss is nothing. Five points! Well, "it's too bad," but he will hang on. At ten points he begins to have bats in his steeple. At fifteen points, Out she goes. He is obstinate up to the point where the stock should be averaged (if he is trading without a stop order) then his obstinacy changes into fear and trembling.

If we dissect the gossip which prevails during market hours we will find that it is 25 per cent. fact and 75 per cent. "thinks" and opinions. Opinions, to be sound, should be based upon facts, but when opinions are asked no one ever stops to consider whether they are the outcome of deep reasoning or whether they merely represent snap judgment.

Each day presents its new array of facts, figures and circumstances. If a trader is neither a tape reader nor a long pull operator he had better gather his own facts and draw his own conclusions, eliminating the intangible "guff" that makes the atmosphere of a brokerage office stifling to anyone who pretends to use his own judgment.

Men are either bulls or bears by temperament. Ninety per cent. of them are bulls in all kinds of markets, which proves that they draw their inspiration from their own characteristics rather than from the elements which make up the market situation. When a chronic bull tries to play the bear side the result is painful in the extreme; but if he will have patience and tenacity he can drill himself into a state where he has no sentiments other than those dictated by judgment.

Anyone who is incurably a bull, it seems to me, should buy only in panics and during bull periods. After they have run for a reasonable length of time or when a turn is indicated he should get out and wait for prices to back down to his starting point again. People talk about going against the trend, referring to the trend of the market, but the trend of their own nature is just as difficult to buck against—perhaps more so.

Nothing ever looks too high to a chronic bull and nothing too low to his brother bear, but if all the animals in the menagerie would put themselves through a process of self-vivisection they would surely profit thereby. As one writer put it, "The man who can play a bull market up and then play a bear market down to the starting point again is designed by nature for a trader."

Find out on which side of the fence you belong and if you cannot school yourself to being both a bull and a bear be a good, consistent, conscientious one or the other.

Whatever happens, take an occasional mental inventory of yourself and decide whether you are equipped to play the game at all; if so, whether you are playing it right.

Hot air and cold feet usually travel together.

A Forecast of Our Future

As Made by Wm. C. Brown

President N. Y. Central R. R. Co

WILLIAM C. BROWN, the president of the New York Central Railroad, has made some interesting predictions as to the probable conditions which will exist at the close of this century's first quarter. He says that, basing his estimates upon the general increase in commodities and national resources upon the growth of the last few years, it is probable that in 1925 the population of this country will be 125,000,000; that the production of corn in the United States will be 4,000,000,000 bushels, cotton 20,000,000 bales, wheat 800,000,000 bushels, and the production of coal, pig iron, steel and other resources far greater than to-day.

After giving his figures, Mr. Brown debates the question of how the railroads of the country will be enabled to handle this enormous increased production.

Mr. Brown says:

"During the fifteen years from 1892 to 1907 the railroad mileage of the United States increased from 175,170 miles to 225,584 miles, an increase of 50,414 miles. The population increased almost 21,000,000. The production of anthracite coal rose from 45,000,000 to 63,000,000 tons annually, an increase of nearly 20,000,000 tons; bituminous coal from 105,268,000 to 306,138,000 tons. The production of pig iron shows an increase of 181 per cent., and that of steel 374 per cent.

"The wealth of the nation increased from $65,000,000,000 to $107,000,000,000, an increase of about $42,000,000,000.

"Vast as these increases are, I doubt if they represent a fair average for fifteen years, and certain it is that they fall far short of approximating the probable increase of the fifteen years to come.

"Accepting these figures, however, as a basis for computation, the end of the first quarter of this century will see the following:

Estimates for 1925

By President Brown of the New York Central

	1907.	1925.
Population of the United States	85,000,000	125,000,000
Production of anthracite coal, tons	63,000,000	90,000,000
Production of bituminous coal, tons	306,000,000	892,000,000
Production of pig iron, tons	25,000,000	72,000,000
Production of steel, tons	23,000,000	111,000,000
Production of cotton, bales	13,500,000	20,000,000
Production of wheat, bushels	634,000,000	800,000,000
Production of corn, bushels	2,592,000,000	4,000,000,000
National wealth	$107,000,000,000	$177,000,000,000

The Bargain Indicator

Calculation Showing Which Stocks Are Cheapest at the Present Time

By The Professor

SO many of our subscribers have enthused over former calculations as to the most desirable purchases, based on earning power and present price, that it has been decided to make this one of the permanent features of THE TICKER.

The figures will therefore be presented as often as price changes and earnings warrant, so that in future none of our readers need be in doubt as to where their particular favorites stand in comparison with all others.

It will be recalled that this method has proved eminently successful in the past, as proved by Vol. 1, Nos. 1 and 2, and Vol. 3, No. 3. Not only did it show the best opportunities; it warned against undesirable investments in certain high-priced stocks of great prestige, but relatively small earnings applicable to dividends.

As earning power determines the value of a stock in the long run, and as the line of value and the line of price continually cross and recross each other, there seems no simpler way of adjusting these manifold differences than by this method.

Since our last table of this kind was presented (December, 1907) tremendous adjustments have taken place in the market. At that time thirty-three different railroads were earning from 10 per cent. to 42 per cent. on their market price. Now only four roads are earning over 10 per cent. on their price. Two things have occurred to produce this result: Prices have enjoyed a great rise and earnings have as a rule fallen off—at least they did fall off last year, but are now showing marked improvement.

Our calculations are as a rule based on the earnings for the first six months of the current fiscal year, which in most cases ends June 30 next, the last six months being estimated. Probably a better showing will be made when the full year's reports are in, but this will not materially affect the comparison; all roads will feel the effects of improved business conditions.

Our table shows that in spite of its rise from 8⅛ in 1907 to 70¼ in January this year, CHICAGO & ALTON is still the best purchase on the list. It will be remembered that our former figures placed Alton at the head of the column because it was earning 6.3 per cent. on par value, equal to 42 per cent. on a price of 15. This was 78 per cent. on its lowest price (8⅛) in the panic. The rise which took place in Alton was equivalent to its doubling in value nearly eight times!

But in the face of this tremendous advance the stock appears to be a better "buy" now than any other railroad stock. Its earnings on par have increased 50 per cent.

Alton could to-day pay dividends of 6 per cent. and still have a larger surplus over requirements than Pennsylvania, New York Central, Illinois Central, Northwest, New Haven, Louisville or Atchison, if all those properties paid the same rate.

MINNEAPOLIS, ST. PAUL and SAULT STE. MARIE makes the next best showing. In fact this road's earnings are so consistently heavy that it seems merely a question of time when melons will be in order. With one exception it is earning the highest percentage on par.

UNION PACIFIC stands third on the list, earning 20 per cent. on par and 11.5 per cent. on market price. It is still in the strongest position of any "big" issue. In a way, this explains its comparative strength during the February decline.

SOUTHERN RAILWAY preferred has recently made great strides. Five months ending Nov. 30, 1908, showed an increase in net income of $1,300,000, notwithstanding a falling off in gross earnings. December's net was $400,000 bet-

THE BEST PURCHASES NOW

BASED ON PRESENT EARNING POWER COMPARED WITH MARKET PRICE

	Est rate present earn. on par.	Price Mar.4,'09.	Earnings on price.
Chicago & Alton common	9.4	60	15.7%
Minn., St. P. & S. S. M. common	16.7	140	11.9
Union Pacific common	20.	174	11.5
Southern Railway preferred	7.	62	11.3
Norfolk & Western common	8.5	86	9.9
Atchison common	9.3	103	9.
Baltimore & Ohio common	9.4	107	8.8
Great Northern	12.	140	8.6
Southern Pacific common	9.8	116	8.4
Canadian Pacific	13.4	166	8.1
St. Paul common	11.5	143	8.
Missouri Pacific	5.5	68	8.
Northern Pacific common	10.8	136	7.9
Colorado & Southern common	4.8	63	7.6
Kansas City Southern *common	3.2	43	7.4
Atlantic Coast Line	8.5	118	7.2
Delaware & Hudson	12.	174	7.
Chesapeake & Ohio	4.5	65	6.9
Pennsylvania	8.6	129	6.6
Louisville & Nashville	8.3	128	6.5
Reading common	7.7	123	6.3
Minneapolis & St. Louis preferred	5.	88	5.7
Brooklyn Rapid Transit	4.	72	5.5
Ontario & Western	2.5	45	5.5
Denver & Rio Grande preferred	4.5	86	5.2
New York Central	6.1	123	5.
Pitts., Cin., Chicago & St. Louis common	4.5	89	5.
Illinois Central	6.9	141	4.9
St. Louis Southwestern preferred	2.4	52	4.6
Chicago & Northwestern common	7.8*	177	4.4
Southern Railway common	1.	24	4.1
Toledo, St. Louis & Western preferred	2.5	68	3.6
Erie 1st preferred	1.3	41	3.2
N. Y., New Haven & Hartford	4.3	159	2.7
Wisconsin Central preferred	2.4	87	2.7
Missouri, Kansas & Texas common	.5	39	1.3
Cleve., Cin., Chic. & St. Louis common	.1	74	.1
N. Y., Chicago & St. Louis 1st preferred	.0	102	.0
Rock Island preferred	.0	61	.0
Texas Pacific	.0	32	.0
Wabash preferred	.0	45	.0
Minneapolis & St. Louis common	.0	55	.0
Denver & Rio Grande common	.0	44	.0
St. Louis Southwestern common	.0	22	.0
Toledo, St. Louis & Western common	.0	46	.0
Wisconsin Central common	.0	49	.0
Erie 2d preferred	.0	32	.0
Erie common	.0	26	.0
Rock Island common	.0	23	.0
Wabash common	.0	17	.0
Iowa Central preferred	Deficit	58	Deficit
Iowa Central common	Deficit	28	Deficit
Duluth, South Shore & Atl. preferred	Deficit	31	Deficit
Duluth, South Shore & Atl. common	Deficit	17	Deficit

*Allowing 10 per cent. on preferred.

ter than the previous year. As the Morgan policy is a liberal one this points to an early resumption of dividends on Southern Railway preferred.

There is nothing worthy of especial comment among the next eight or ten issues. COLORADO SOUTHERN and KANSAS CITY SOUTHERN, having had a considerable rise, seem to have adjusted themselves to the others.

PENNSYLVANIA has improved its position, and so has READING.

NEW YORK CENTRAL shows up a little better than it did a year or so ago, but no stock earning 5 per cent. on its market price can be considered cheap. Many of the other issues in this class, such as ILLINOIS CENTRAL, NORTHWEST and NEW HAVEN are in fact selling outrageously high, considering their earnings, and in some cases only a material increase in earnings in the immediate future will warrant a continuance of dividends at present rates.

SOUTHERN RAILWAY common is working up out of the ruck and should give a better account of itself.

Among the issues which show no earnings we find certain ones which have recently run up to absurdly high prices considering their actual status. A great deal of the recent bulling has been on "prospects," all of which appear to be fully discounted in the prices reached by those stocks which bring up the rear.

Of course any property which cannot earn its fixed charges is in a bad way, unless it has a wealthy parent, as in the case of DULUTH. Nevertheless the low-priced stocks should be watched, for as has been proven in the case of Alton, the greatest of opportunities occasionally arise in this quarter.

Taking the first thirty issues from our December, 1907, table, we find that they were earning on an average of over 20 per cent. on market value. Bargains were the rule.

At present the first thirty issues show an average of about 7 per cent. But it should be remembered that the trend of earnings is upward, as shown by the following:

August earnings were.......... 86.43% of previous year's gross
September earnings were....... 94.53% of previous year's gross.
October earnings were......... 95.84% of previous year's gross.
November earnings were....... 99.03% of previous year's gross.
December earnings were........107.16% of previous year's gross

The above tables, figures and comments are not to be considered as our argument in favor of or against the market. We aim to present facts and figures which will enable the individual to choose his own course. Even more important than the selection of stocks is his decision as to whether or not the present is a propitious time for making purchases.

Gold Movements

By Roger W. Babson*

THE natural movement of gold divides itself readily into four channels. There is, in the first place, the primary movement from the mines to the distribution centres—London for the European markets and New York and Seattle for the United States. After that comes what might be called the first distributive movement, where the gold arriving, for instance in London, is sold to the highest bidder, often representing far-off countries. A readjustment movement follows, where, we will say, gold purchased in London by Paris is sent on to Switzerland, Italy, Belgium, or other points. Lastly there is the constant flow of gold from one part of the world to another, a movement which is due to the ancient causes of supply and demand, or trade and other balances to be paid, and of bank reserves to be built up or released.

Whatever schemes of international gold certificates or of an international clearing-house may be proposed by financial economists for the purpose of reducing the gold movement, there can never be any question as to the necessity of the primary movement from the mines to the distributive centres. Roughly speaking, the world's gold production originates in three great sections, South Africa, Australia and the United States. From the two former comes about half of the gold mined in the world each year.

The great distance of these localities from any important financial market and the fact that most of the stock of the South African and Australian gold mines is held in England, makes London the point to which the product of those mines is naturally sent. So that nearly one-half of the world's annual production of gold comes into the London market for distribution.

Arrivals of gold consigned to the London agents of the South African and Australian mines are fully advertised and what amounts to a regular auction is held every time a consignment arrives. The Bank of England is always ready (must be, by law) to purchase all gold of standard fineness offered to it, at 77 shillings 9 pence per troy ounce. But very rarely does the bank, or anyone else, secure bullion at this price. Usually the bidding of the representatives of the various foreign banks puts the price well above that figure.

London is the one free gold bullion market of the world. As the metal arrives from the mines it is sold to the highest bidder without fear or favor. But this process must not be confused with the gold market maintained by the Bank of England. Usually the bank will sell gold bars at a price; sometimes it will not, and then the cry goes up that London is no longer a "free" gold market. As a matter of fact the Bank of England is very far from being a "free" gold market, but the open market is free and as long as there is any gold coming in, the highest bidder gets it.

In this country, on account of our entirely different currency law, there is no bullion market at all, free or otherwise, and the primary movement of the raw metal is from the mines direct to the United States assay offices, where a fixed and unvarying price is paid for it. In other words, all the gold produced in this country immediately passes into circulation. There is no long trip to an open market, and then an apportionment to all parts of the world. The owner of the raw gold takes it to the nearest Government assay office, where it is assayed and bought from him at so-and-so-much per ounce. Afterwards, if anyone needs gold bullion for export or otherwise, they can obtain it at the treasury at a fixed price, so long as the supply holds out.

The very fact that there is a primary movement of gold from the Australian and South African mines to London makes necessary the distributive movement to the various markets, whose representatives at the British capital have

been successful in their bidding for the new supply. After that comes another movement, to the smaller markets which are not directly represented in London, but must obtain the supplies of gold they need through their more important correspondents. These three movements carry the gold from the place where it is mined to the lesser banking centres, where its distribution is completed. But the movement of the metal by no means comes to an end with its distribution. Now comes the fourth movement, dependent entirely upon financial conditions—the movement which will often result in the practical transfer of all or part of some firmly established gold supply to some distant market.

There are three prime influences which bring about such movements. The first is the necessity of making international payments for merchandise or securities at times when exchange is scarce. The second has to do with the maintenance or restoration of bank reserves which can at times be accomplished only by outright purchases of gold in other countries. The third is due to international operations where bankers are anxious to transfer large balances from one point to another, and, not finding exchange available in quantity, send gold instead.

From the very nature of these causes it will readily appear what a mistake it is to imagine that the development of our international financial relations will eventually make it unnecessary to ship gold at all. Only one of them, the first, could possibly be affected by the arrangement of a system of international credits. These large payments by one country to another, such for instance, as the payment for the Panama Canal or the payment to us of the San Francisco fire indemnity, continually have to be made, and often under circumstances and at times when it is impossible that there should be a sufficient amount of exchange available. It is hard to see how, even if an international system of crediting and debiting should be arranged, payments of this kind could eventually be settled except by remittances of gold or exchange.

And as for gold shipments arranged for the building up or maintenance of bank reserves, it will appear that as the bankers of one country become more closely allied, the interchange of gold is greatly facilitated. Through various causes the gold reserve of the banks, particularly the great national banks of Europe, becomes depleted at times, and then these institutions are apt to call upon their foreign connections to send them the gold they need.

The other reason which makes gold, often apparently a settled reserve, move from one country to another is that in the highly developed state of the foreign exchange business, balances are continually being transferred to the points where they can most advantageously be used. As long as exchange on the point to which the transfer is to be made can be bought, that will be the form of remittance. Where exchange cannot be had, gold will be sent; and so it appears the more transferring of balances, the greater is apt to be the circulation of gold.

The importing of gold does not necessarily indicate "good times" nor even lower money rates nor the approach of a crisis; nevertheless important deductions may be made from statistics thereon. These deductions have been summarized by Burton as follows:

"Every country will, under normal conditions, have a certain share of the gold or primary money supply of the world. The different countries have been compared to reservoirs of water, of various sizes, connected by pipes. All the reservoirs will maintain the same level. The share of each country is determined primarily by its wealth. There is a tendency for metallic money, which is a form of wealth, to maintain in every country a fixed proportion to other forms of wealth. But the share of each is affected by the volume of its trade and other incidental circumstances, among which are established methods of transacting business, the habits of its people and, notably, its currency system.

"The currency system affects the gold supply. Paper money displaces gold, and causes it to be sent elsewhere in a less or greater proportion, according as it is absolutely based upon a deposit of gold, is redeemable in gold on presentation, or is not redeemable at all.

"Methods of transacting business influence the supply. Where balances are largely settled at clearing-houses, and checks generally employed, less currency and less gold are required. In this particular, the contrast between England and France is very marked. The latter country makes less use of clearing-houses and checks and accordingly requires a larger supply of gold and silver, the latter metal being extensively used.

"The habits of the people exercise an important influence. After the Franco-Prussian War it was found that the French peasant proprietors had hoarded large sums of gold. In the great emergency created, these amounts were brought out and assisted in the payment of the indemnity. Frequently when native grandees in India die, it appears that they have been accumulating a great stock of gold, much of it in the form of ornaments, which for years has been kept out of circulation. All this hoarding tends to increase the demand on the gold which is in circulation as money.

"The peasant or grandee who hoards, causes so much of the world's capital to lie idle. The benefit accruing in time of crisis or emergency to countries in which quantities of gold are withheld from general circulation, is obtained at the cost of diminished activity and volume of business under ordinary conditions.

"M. Paul Leroy-Beaulieu quotes figures to show that France, in 1885, had a circulation of metallic money amounting to 215 francs per capita; England and the United States had, respectively, 86 and 68 francs per capita. Of course if the quantity of coin in circulation had been based upon per capita wealth at that time, England would have shown the largest quantity per capita, France next and the United States the last.

"There is then a normal share of gold which belongs to each country. If any country has more than its share, it will export. It is easy to recognize that from a gold-producing country, such as Australia, South Africa, or Alaska, the greater part of the gold mined will be exported. Likewise, if gold is held in any country in such quantity that it can be invested elsewhere more advantageously, either in loans or in purchases, or can be sent abroad in payment of debts, it will be exported. If it is invested in loans abroad, it is an indication of surplus capital, and makes a favorable showing. If invested in purchases at low prices, it shows ability to draw upon other countries for an increasing share of objects of utility. If the purchases show that home prices are higher than foreign, and a supply of things usually obtained at home must be obtained from abroad, the export of gold is a sign of danger. Thus an important question in determining the significance of shipments of gold, is the nature of the purchases or investments to be made with it.

"The specie exports and imports of this country have furnished distinct indications prior to each period of disturbance, but their significance cannot be understood without an examination not only of our general situation, but also of the particular situation at different times.

"Of the various circumstances under which excess of exports of gold indicate the approach of a crisis may be mentioned the following:

"First. When gold is required for purchases from abroad which are made at high and rising prices. This indicates over-action and concurs with unusual increase in the prices of domestic supplies. Especially is this true, if in a time of rising prices, gold is exported for commodities usually supplied by domestic production. Such a condition cannot long continue without a reaction and ensuing depression. The indications which are significant in connection with the imports of merchandise apply to the exports of gold. On the other hand, the export of gold for purchases when prices are low, is not an unfavorable condition. It indicates purchases upon advantageous terms.

"Second. When the export of gold is attended by a scarcity of money and a marked increase in the rate of discount, it is a decidedly unfavorable indication. This is of the same kind with those indications noticed in the conditions of banks. A steady increase in the rate of discount, or a decrease in the supply of gold, is a sure precursor of a crisis. The only question is how long this condition can continue without a crash.

"Third. An unusual balance of ex-

ports of gold, not explained by surplus production, continued for a considerable time, or a sudden withdrawal of large amounts is one of the most unfavorable indications. It is to be noted that there is an exceptional sensitiveness in financial centres on the subject of gold exports, and sometimes an entirely normal export is interpreted as showing instability and destroys confidence when there is no reason for distrust.

"It should be added that, when for a succession of years gold is withdrawn from circulation by reason of the substitution of unconvertible paper as money, the conditions which exist are sure to vary from normal lines. Credit will rest upon a false basis and the inevitable tendency will be towards an increase in the quantity of paper money outstanding and a dangerous expansion of credit.

"In many respects the phenomena of a balance of gold exports are similar to those arising from a balance of merchandise imports. The two are expected to appear contemporaneously; but in essential particulars they differ. Some differences depend upon the question of gold production. In countries like Australia and a portion of South Africa, where gold mining is the leading industry, gold exports are naturally classed with merchandise exports, and an export is a favorable indication. In non-producing countries like England and France, where the use for money is the prevailing demand, gold imports are a favorable indication.

"There is another difference in a noticeable tendency towards contemporaneous decline in gold reserves in all the great financial centres. That which is lost in one country is not gained in another. This decline is explained by the withdrawal of considerable amounts to be hoarded or retained in circulation outside of banks, and to some extent by the transfer of gold to countries outside of the most advanced industrial and commercial circle. The influences which cause gold to be hoarded or retained in circulation outside of banks are not unlike those which affect the circulation of paper money. International credits or payments frequently cause an excess of imports of gold in a country to coincide with an excess of imports of merchandise. Again, a large demand for money, manifesting itself in high rates of interest, may cause gold to be retained in a country contemporaneously with an unusual balance of imports."

The Small Trader

Should He Not Be Given an Opportunity to Learn?

A FINANCIAL writer once made the statement that in his opinion any individual who had saved up $500 and had no immediate use for it otherwise, should invest it in securities. Recently he has found reason to retract this statement, on the ground that the person with only this amount of capital at his command is apt to be "carried away" by profits which might accrue from his speculations and that this will ultimately result to his disadvantage.

He tells the story of an old man, retired on a pension, having $600 available for investment. This he was persuaded to withdraw from the savings bank and put into Steel preferred at 60 on the ground that it paid him nearly three times as much in dividends as he was receiving in interest. After keeping the stock for three years he sold it at a few hun-

dred dollars profit. He then put principal and profits back into the bank where it continued to draw interest for a while.

But the result of his first venture sowed the speculative seed in his mind, and the upshot was that he bought five shares of Union Pacific at 190. The stock was paid for and locked away During the 1907 panic he saw all of his former profits wiped out, but did not grow anxious until the decline began to encroach upon his principal. Then, unable to stand the strain, he forwarded the stock to his broker and it was sold on his order at 105. He put what remained of his money in the savings bank.

Five months later he developed the speculative fever once more. He communicated with the writer in question requesting advice regarding another investment; whereupon the scribe advised him to keep his money in the savings bank, on the ground that he did not understand investments and was, therefore, unfit to join the army of investors.

We do not quite agree with the gentleman who took this stand. You cannot cure the speculative itch by telling people not to scratch.

As the scribe did not care to guide the old man's operations he probably has or will fall into the hands of some market letter shark with a discretionary pool outfit attached, or he will control himself up to the point where the market begins to sizzle on the bull side. At such a time he will probably repeat his last and most disastrous operation.

We believe that the investor or the speculator with $100 is entitled to as much consideration from stock brokers and investment experts as the man with $10,000 or $50,000. The number of dollars possessed is no index to the amount of individual intelligence. The investor with a few hundred dollars may make a million and the man with a million may be reduced to beggary.

Both the rich and the comparatively poor have to learn the business of investing and speculating before they can follow it with success; and as experience puts all other instruction in the background, it is better for everyone to commence operations in a small way and keep at it.

Any house which has the capital and the facilities for handling small lots is discarding an important source of revenue by refusing them.

Any expert who refuses to put a small client in the way of securing what he wants is driving him to some other and probably less qualified authority.

One broker said to the writer a few days ago:

"I think you made a great mistake in suggesting that people begin trading in ten share lots of stock. In my opinion brokers should refuse to take orders for less than 100 shares."

I pointed out to him three instances where people had started with very small amounts and made thousands of dollars which they never would have realized had they been forced to wait until their original capital was up to 100 share requirements.

Those who are obliged to assume an advisory position toward small traders and investors can serve their clients best by inducing them to hold off until there is a panic or a violent break. By exhibiting a chart showing the market swings for the past ten years the opportunities for profit on securities bought at the proper time can be brought home very strongly to them. Likewise the risks attending purchases made in booms can be held up as a warning against inopportune purchases. These people are always buyers—never short sellers.

If a man started a small store and loaded up with a lot of unsaleable goods at high prices, resulting in his eventual bankruptcy, no one would say that he should not settle his difficulties, get on his feet and commence doing business again with past experiences to guide his future operations.

If the writer in question had a youngster just learning to walk, and the little one should stumble and fall flat, would the father, in picking it up, warn it never to try to walk again?

It is exactly the same with the small trader. He may be timid, uneducated, knowing nothing of the business of investment or speculation, but the time may

come when instead of $100, he will have $50,000 to invest in one chunk. Would you have his education begin when the $50,000 arrives?

It seems to us better to let him begin with $100. He is then close to the ground. If he stubs his toe he may bump his nose, but he cannot dash his brains out.

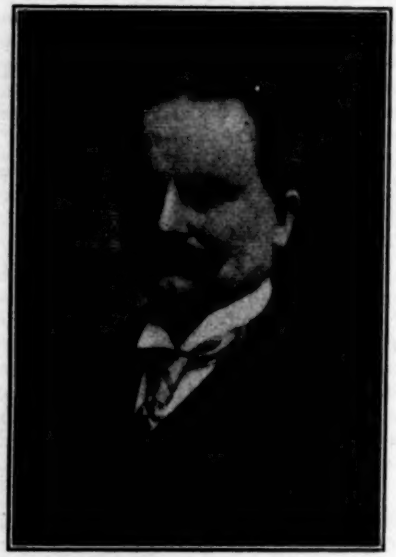
A Private Crop Reporting Bureau

By B. W. Snow

In "Profitable Advertising"

THERE are only two organizations that carry on regular and systematic crop reporting upon a scale covering the whole country. One is the United States Department of Agriculture, the other the bureau maintained by the Orange Judd Company under my direction. The bureau is the only non-governmental agency that has the facilities, and is ready to spend money required, to secure definite, regular, prompt, and systematic crop knowledge, and the crop reports which it presents have stood a test of twenty years, in accuracy and reliability not even second to governmental work. Its work is quoted in every grain exchange in the country, and is cabled abroad and published regularly in the grain markets of every important commercial center of the world.

This bureau was established and is maintained at heavy expense primarily for the benefit of the readers of *The Orange Judd Trio,* but it also attracts a unique constituency for a farm paper; a subscription list which includes manufacturers, bankers, railroad men, wholesalers, jobbers, in fact the directing force of every line of industrial and commercial activity that is dependent upon the year's harvests. The business of the nation rests upon the crop results of the year. The men directing the commercial and industrial activities of the country must have early knowledge in order to plan ahead their industrial campaigns; as bountiful harvests mean increased business, while crop failures mean speedy curtailment of effort. Such knowledge is as essential in the conduct of modern business as is commercial credit. The classes representing the concentration of vast capital, the intelligent use of which depends largely upon crop results, are prepared to learn for themselves the actual crop prospect through their own sources of information.



B. W. Snow.

The Granger railroads, dependent upon farm products for their tonnage, each maintains a well equipped bureau charged with the duty of ascertaining in advance probable harvests along its line. These reports usually go to leading officers in confidence, and may have something to do with sudden waves of buying or selling of Granger stocks in Wall Street, which outside operators find it so hard to understand at the time.

The classes that are able and willing to post themselves, regardless of cost, upon the outturn of the year's harvests, represent the customers for the farmer's products, and in their dealings with him they at all times have full knowledge of the aggregate supplies he has to market. Unless he is equally well posted, he must be placed at a disadvantage in his transaction; and it is to put the seller of farm products upon a plane of equal knowledge with the buyers that the Judd Company maintains a crop reporting bureau.

The machinery through which this bureau keeps the public in close touch with national crop conditions is of sufficient interest to deserve a brief mention. In every crop producing country there are one or more trained observers who monthly, during the growing season, report upon the status of crops in their locality. These men report for a definite area, upon a uniform style of circular, at the same date; so that their answers may be definitely tabulated to show the crop situation throughout the country upon a given date. These reports are issued each month, and are not to be compared with the crude, fragmentary, occasional, and unscientific crop information that sometimes, usually in periods of crop excitement, appears in newspapers that maintain no regular and systematic bureau of crop reporting.

The list of reporters is carefully chosen among men of good judgment among farmers, and is under constant scrutiny. For many years the late Governor Mount, of Indiana, served as reporter for his county. In the present list is a former governor of Nebraska, an ex-lieutenant governor of Kansas, a number of members of the state legislatures, and scores of men chosen to local positions by their fellow citizens. The list is not only representative, but is highly representative of the best intelligence of each community represented.

Next to accuracy the value of crop reports lies in their promptness. In this respect this bureau reports are ahead of those made by the United States Department of Agriculture. The reports appear earlier each month, final estimates are presented much earlier, and in periods of critical importance definite information is published each week, instead of waiting, as does the government bureau, for a fixed monthly date of issue.

The crop reporting bureau of Orange Judd Company fills a place that would be otherwise vacant, and its value to the public is indicated by the large measure of attention its reports receive from the commercial public at home and abroad.

A Department for Criticism of Methods

WE have decided to open a department for the criticism of methods employed by traders and investors.

We propose to criticise the reasons which induce people to venture or invest; their method of margining; the use or non-use of stop orders; choice of brokers; the motives which lead them to close their trades, etc., etc. This covers a pretty wide field and one which has heretofore received no attention.

The Ticker aims to eliminate weak points in the methods of traders and investors.

In submitting queries, kindly keep within the lines above mentioned. State particulars as fully as possible, showing exactly what you did, why, what the results were, and how the trades stand at present.

We cannot criticize accurately unless we have all the details.

Address Department of Criticism. Enclose stamped addressed envelope if personal reply is desired.

We will print such inquiries and criticism as seem of general interest, but no names will be mentioned.

A Glimpse at Gary

The Steel Corporation's New Plant and Its Economies

By Daniel Vincent Casey in "System"

GARY is a misnomer. The new steel capital on the southern lip of Lake Michigan whose first blast furnaces spouted golden metal the other day should have been christened Economy, Indiana. For economy is the inspiration and the genius of the place. Location, size, arrangement, equipment, and every great and lesser detail of the whole huge plant serve that one master purpose—saving. Saving of materials, time and labor; conserving of energy; elimination of wastes. The problem of producing more steel and cheaper steel than any other mill on earth has been worked out with the confident foresight of experience and the certainty of mathematics. Some $42,000,000 have been poured out on the Indiana barrens in a little more than two years. This to complete the first unit of production, to create a harbor for its ore and fuel boats, to provide a town for its army of workers; and $33,000,000 more will be required for the construction now under way.

Immense as this total is, it will be doubled—more likely trebled—before this later Pittsburgh finds its level of maximum output.

For another twelve-month, the builders will outnumber the steel makers. Of the treasure already invested in the plant, the millions appropriated, no dollar has gone or will go for experiment. Here lies Gary's business significance—its lesson to every man who makes or sells for profit. The courage and imagination which have spent forty-two million dollars to clip a few vital seconds from the birth throes of a steel rail are linked with cool-brained conservatism. No device, however promising, which has not been tested exhaustively, beyond chance of failure, has been given place in the scheme. Gary takes no risks. The plant is a summary of the proved methods and tried processes of steel making developed to the present limit of logic and safety. It is a convention of the short cuts which have slashed steel costs year by year in the face of rising fuel, ore and labor. Its furnaces, its power generators, its conveying machinery, its giant rolls and motors, though they mark the frontier of progress in steel making, have all been tried out in previous installations.

The best, the record-breaking features of all other mills have been assembled, magnified. To them have been added all that the craft of factory engineer and transportation expert could offer. A site, a town, a harbor, literally have been manufactured to order. The result evolved is the most perfect big industrial plant the sun shines on.

This is Gary to-day—the purpose already expressed in concrete and steel or scheduled for realization as soon as the builders can effect it. The larger design is in the lap of the coming decade. Given a demand to justify such expansion—here is no rivalry with existing mills, but provision for the future just dawning—Gary will surpass Pittsburg as a producer of steel. For the sufficient reason that open-hearth steel, the favored material for rails, bridges and structural shapes, can be converted and rolled at Gary cheaper than anywhere else in the world. Industry is as fluid as water, seeking the lowest level always of production.

Add Gary's strategic position, its transportation advantages, its unlimited room for extension, and you have the imperative considerations which will plant the new mills of the corporation's subsidiary companies—as these are made necessary by the country's hunger for steel products—at Gary, where the basic material is cheapest and freight charges are nil. The same

logic of saving will gather hundreds of independent factories using merchant steel—may even double the present project and bring forth a twin plant making 8,000,000 tons of steel annually. with miles of tributary works. Then Gary's circle of economy, its scheme of husbanding wealth otherwise dissipated in unnecessary operations will be rounded and complete. The sum of a thousand short cuts will be cast up and credited to America's resources.

Don't bandy words—stop and listen to yourself waste time. Get to the point and follow up with action.

Analyzing an Investment

By Clinton I. Collver, B.C.S.

WHAT dividend does it pay? This is the first question suggested to the mind of the investor when a new railroad investment is brought to his notice. In the answer the investor usually expects to find a basis for judging the value of the stock.

In the long run dividends are a very good criterion of value, provided both present and future earnings are considered.

However widely intrinsic value and market price may differ at any one time, eventually it will be found that intrinsic value is the basis of the market price; but before discussing the relation of value and market price, further methods of judging intrinsic value of a stock should be considered.

Methods of Valuation

Many methods have been proposed for determining the intrinsic value of a stock. Only three have been widely accepted. If market prices are ultimately controlled by intrinsic value, the success of an investment will depend largely upon the accuracy with which the real value of a stock is determined. One cannot expect to reach a correct conclusion by means of a wrong basis. The three methods of valuation are:

First: The actual cash capital or equivalent of cash employed in the construction, in the equipment, plus the present working capital. After subtracting the indebtedness the remainder will show the value of the total stock capitalization outstanding.

Second: The cost of honest, efficient reconstruction, subtracting the indebtedness.

Third: The basis of earnings from which dividends may be declared.

The Cost of Construction Basis

Suppose the cost of a road, plus cost of equipment, plus current assets (cash, bills receivable, etc.) amount to $1,000,000. There are bonds, notes, bills payable and other obligations to the amount of $500,000. Suppose there are also $500,000 of stock consisting of 5,000 one hundred dollar shares. According to the Cost of Construction Basis each $100 share would be worth par.

Let us apply this basis of valuation to a small road which connects a mining town with another large railroad system. If after the road is put in operation the mines should peter out and it was found that there was no other form of traffic-making business, the boom town would fade away, trains would cease to run, and the tracks would, unless pulled up, become worthless "streaks of rust." Take another view: Suppose the cost of construction to have been at very high prices for labor and materials and the work done by a company composed of promoters of the road, to the

detriment of the railroad's stockholders; or the construction may have been so poorly done that the road could not be efficiently operated without practically rebuilding it. These are a few of the fallacies of the Cost of Construction Basis.

Cost of Honest, Efficient Reconstruction

This basis is usually much more reasonable than the foregoing. If the road was built when labor and materials were either very cheap or abnormally high this method would show more accurately the value of the road as a non-going plant. The Cost of Reconstruction basis is, however, open to the objection suggested above, that perhaps it would not pay to rebuild the road at any cost, and especially at high prices for labor and materials. The cost of rebuilding the mining railroad, given as an example, would no more be a fair valuation than would be the cost of the claim, resinking the shaft, and installing the machinery, etc., in one of the abandoned mines be a fair valuation of the mine.

Earning Power

The third basis, the Dependable Earning Power, of the railroad is the most equitable basis for valuation of a railroad stock. If the investor determines not only the present dividend (if it be a dividend paying stock), but also the probability of maintaining and increasing the rate he will have, in nearly every conceivable instance, a very safe basis for determining the value of the stock. He should determine the dependable earning power per share and notice the proportion the percentage of dependable earning power bears to market price.*

The rate of dividends paid is often a very poor criterion of value. For example many people bought Metropolitan stock because it paid large dividends. It ultimately developed that these dividends were paid out of capital. How few there are who have not "invested" in oil stocks, Mexican plantations, etc., because they paid large dividends.

Too many people would rather buy stock of a company paying six per cent. and earning six per cent. than that of one paying four per cent and earning twelve. They fail to consider the fact that in case of the least slackening of business the company paying its total amount of earnings in dividends will have to reduce the dividends or suffer insolvency. On the other hand, a surplus over dividends is a source of strength in time of trouble, and the surplus will accrue to the benefit of the stockholder. If the surplus is invested in the company's own securities, the interest or dividends on the purchased securities will accrue to the benefit of the stockholders. If the surplus will accrue to the benefit of of other companies, the yield will strengthen the company's treasury just that much. Should the securities purchased be those of competing or connecting lines there may be far more important gains through advantageous traffic agreements or the elimination of rate wars. Suppose the surplus be invested in improvements or new construction or equipment; this added value should eventually bring in substantial returns without necessitating additional indebtedness and consequent fixed charges.

Comparison of Pennsylvania and Southern Railroads

Until recently it has been the settled policy of the Pennsylvania System to lay aside at least one dollar for improvements and new construction for every dollar paid out in dividends. The stock has received dividends averaging six per cent. for fifty years, the lowest dividend being 2 per cent., and in no year was there no dividends. Since 1891 the dividend has not been lower than 5 per cent. In recent years the rate has been from 6 to 7 per cent. After making extraordinary expenditures of over three millions there was a surplus over 6 per cent. dividends of nearly eight millions for the year ending June 30 1908.

Now six per cent. on an outstanding capital stock of $314,594,650 means that each year about $18,875,400, besides the company's surplus and the Pennsylvania's ability to secure money stand between the Pennsylvania and financial trouble. Maintenance charges are so liberal that much of what is charged to this account by the Pennsylvania would be charged to capital by many other

*Preferred stocks such as Union Pacific preferred, so well assured of dividends at fixed rates, change in price little more than bonds.

roads which would thereupon distribute such sums as dividends. The Pennsylvania management proceeds on the correct idea that a road must be in better shape each year to maintain the increased efficiency demanded by modern traffic. A railroad must advance or it will fall before its more progressive competitors. Even if there are no competitors, efficient operation depends each year more upon larger freight cars, longer and heavier trains. These compel better roadbed, steel, stone and concrete construction, etc. As a result of the Pennsylvania's conservatism and excellent management, the company has undoubtedly the highest credit of any corporation in America.

The Southern Railway has paid dividends on its preferred stock year after year when none should have been paid. Finally, after paying five per cent. for five years the dividend on the preferred was reduced to four per cent in 1907, and no dividends were either earned or paid in 1908.

Although only $122,707 was spent for improvements, by no means enough to keep the road up to the increased efficiency which modern traffic demands, there was a surplus, or margin over fixed charges for the year ending June 30, 1908, of only $279,143; in other words, taking Mr. Carl Snyder's figures for net interest-bearing debt outstanding at more than $182,976,000, there was a margin over extreme probability of insolvency of a little less than .00153. Of course last year was exceptional, but it is the exceptional years that railroads as well as individuals, should be prepared for.

Keeping in mind the above comparison and that the investor depends upon safety as well as amount of income, we ask, which is the safer investment, the first mortgage bonds of a road like the Southern or the common stock of the Pennsylvania?

Financial Management and Support

Besides the all-important value factor of earnings, there is one other factor of value which should be remembered: that of Financial Support and Management. It is needless to compare the management of roads such as the Great Northern, Northern Pacific, with such roads as the Missouri Pacific, Erie, etc. When a corporation is steadily showing satisfactory earnings, it may usually be taken for granted that the financial management and support are satisfactory. It usually requires excellent management to produce large and steady earnings. Efficient financial management usually is an excellent indication of strong financial support and strong financial condition.

The recent trouble of the Westinghouse Electric and Manufacturing Company, an industrial showing almost constantly increasing earnings and managed with a conservative policy as to dividends, on account of the inopportune maturity of its short time notes and the lack of strong financial interests back of the company, proves that not only the best financial management but also strong financial support, are essential to the value of the stock. What would have been Erie's or Southern's fate, both of which had also unfortunate maturities of obligations, had not important financial interests stood behind them?

It is well to consider, if only briefly, the relation of values and market prices. At one time, when Interborough-Metropolitan preferred sold at $87⅜, it was earning considerably less than nothing. More pernicious financial management and support could hardly be imagined, at least from the investor's point of view.

During the recent panic Pennsylvania stock sold as low as $103½ while earning a large surplus over dividends and with the strongest and best financial management and support. Do such wide variations of prices and intrinsic values tend to nullify the intrinsic value basis?

The market price of anything depends upon supply and demand. In Holland, during the tulip speculation, bulbs sold as high as $5,000, which was a good deal of money in those days. When Northern Pacific rose to $1,000 it didn't prove that the stock was worth 850 points more in the afternoon than in the morning, but it was worth $1,000 a share to the man who was short and had to cover.

The supply of a stock is limited by the available outstanding stock. A new issue of stock nearly always causes a fall in price. When a stock is closely held it is easier to advance its market

price than that of an issue like Pennsylvania with 60,000 stockholders.

Following are the principal factors determining demand.

Intrinsic value; the general industrial condition of the country; confidence or the lack of it; whether the general public is in the market; the political situation; rumors; sudden news, for example, of a great disaster, especially if it be in this country; threatened war; legal decisions; condition of the money market; rates of interest and foreign exchange; the sympathetic influence of other stocks —when Consolidated Gas broke other stocks fell; the popularity of a stock, its marketability, reputation and distribution; the subtle yet important influence of an increasing gold supply; the saving and therefore the investing power of the country.

However important the other factors governing demand may be at any given time, the most important is intrinsic values. These depend upon earning power, and financial management and support. Mr. Sereno S. Pratt in his excellent book "The Work of Wall Street," likens the variations of prices "to the path of a bicycle rider who starts out for a long trip over a road never before traveled by him. The actual distance is twenty miles but his cyclometer at the end registers thirty. This is due to the fact that he has not traveled in a straight line, but has gone from one side of the road to the other in an endless succession of curves in order to avoid teams and ruts. Then at one point of the road he missed his way, or has been maliciously misdirected, and thus went four miles before he discovered his mistake and turned back. In like manner prices travel through an endless succession of daily curves or fluctuations, and sometimes miss the road altogether and, misled by manipulation, travel a long distance astray, but in the end they arrive at the true destination: Value. . . . The speculator, therefore, who studies most closely the conditions that create real value, and bases his operations on what this study of values reveals, is most likely to achieve success."

Of course this applies more forcibly to the investor than to the speculator since the investor usually "holds his stock, paying little attention to temporary market factors. It cannot be expected that the Stock Market, that delicate barometer of all factors of supply and demand, will even approximate the intrinsic value of a stock at any given time. However the variation between value and market price can be noticed in other commodities than stocks. During the best of times the value of a piece of real estate and the price obtainable at a forced sale will not be the same. During the recent panic the best of real estate could scarcely be sold at any price.

To the intelligent investor the usual variations between value and market price are only a source of great and certain profit, for he knows that if he purchases property, whether real estate or stocks, for less than its value, some day it can be sold for all it is worth, and perhaps more.

The investor should watch the weekly, monthly, quarterly and semi-annual statements of his corporations, but the best basis for judging the value of a stock is the annual report to the stockholders. Since all railroads in this country are now compelled by the Interstate Commerce Commission to report in uniform classification of accounts, one able to analyze the report of one railroad can analyze others.

The information contained in a railroad report may be divided into four parts:

1. The General Physical Features and Statistics.
2. The Income Account.
3. The Balance Sheet.
4. Traffic Features and Statistics.

The General Physical Features and Statistics should include:

a. Location.
b. Terminals and Affiliated Lines.
c. Character of the Surrounding Country.
d. History and Ownership.
e. Average Miles Operated (length).
f. General Character of the Road; Grades, Single or Double Track, Weight of Rails, Kind of Ballast, etc.

Income Account should include:

a. Freight Earnings.
b. Passenger Earnings.

c. Total Earnings, including Other Revenue.

d. **Maintenance:** (1) Way and Structures; (2) Equipment.

e. Total Expenses.

f. Net Revenue.

g. Outside Operations (income from investments, etc.).

h. Gross Net Earnings.

i. Taxes.

j. Final Net Earnings.

k. Fixed Charges (int., rentals, etc.)

l. Net Divisible Income.

m. Dividends.

n. Surplus.

o. Deductions from Surplus Earnings for Improvements, Reserve Funds, etc.

p. Net Surplus Earnings, Credited to Profit and Loss.

The Balance Sheet should include:

Assets.

Capital Assets—
a. Cost of Road.
b. Cost of Equipment.
c. Investments in Securities.
d. Sinking Funds.
e. Materials and Supplies.

Current Assets—
a. Cash.
b. Due from Agents, Conductors, etc.
c. Traffic Balances Receivable.
d. Bills Receivable.

Liabilities.

Capital Assets—
a. Capital Stock.
b. Funded Debt.

Current Liabilities—
a. Interest Accrued.
b. Vouchers and Payrolls Unpaid.
c. Dividends Declared.
d. Traffic Balances Payable.
e. Loans from Banks.

The Balance represents the Profit and Loss Account.

Traffic Features and Statistics include:

a. Character and Volume of Business Done.

b. Rates.

c. Competition.

d. How Much Traffic Only One Way.

e. Density of Traffic.

f. Performance of Equipment and Cost per Unit of Service Rendered.

What may be designated as Personal Factors are also important. These are:

Whether the property is a "One Man Road" or an organization; affiliations; financial support; reputation; possible present or future legal complications.

Conclusions are often most accurately drawn and most emphatically shown by a comparison of several corresponding sets of figures. It would not be difficult to deceive the investor by "juggling" the accounts for one or perhaps even two years, but a comparison of reports for several years will show up any attempt at concealing the real state of affairs or "window dressing," as it is called in Wall Street jargon.

Not only should the reports of the railroad under consideration be analyzed, but comparisons should be made with at least one other well known road with a reputation for careful management, operating in the same section of the country and under the same general conditions. A capitalization that would be absurdly high for a road such as the Chicago Great Western, on account of the level prairie country through which it passes, would be extremely low for construction in the Rocky Mountain region, where extensive tunneling, bridging and blasting are a necessary part of the cost of construction. Of course as to whether the Rocky Mountain cost was justifiable would be largely decided by the earnings. Again, it would be unfair to compare maintenance of equipment on the St. Paul and the Southern Pacific, since locomotives operated where there is much alkali in the water, as there is in the Southern Pacific territory, require larger expenditures for maintenance than would the locomotives of the St. Paul.

For special reasons it may be necessary for one road to spend more money than another without necessarily obtaining better results.

It should also be remembered that it is difficult to compare the operation of a single track road with a road which has two or more. Receipts and expen-

ditures per mile are per mile, for example, from one terminal to another, not this distance in the case of a one track road, and this distance multiplied by two, three, four or more in the case of a road having more than one track. It naturally costs less to maintain a hundred miles of four-track road up to a certain standard than four hundred miles of single track.

With the idea of earning power as almost the only criterion of intrinsic value, it would make little difference whether a road has one hundred and ten or fifty-five-pound rails; whether the ballast is stone or dirt; whether the equipment is of the highest type of modern construction or almost reduced to junk, if only the earning power is satisfactory and dependable. What difference whether the road bed is excellently maintained or whether, as is the case of some Western roads, the height of the weeds is limited between the rotten ties only by the clearance of the axles. It would make little difference whether the road be an unconnected line from rural Fairfield to Smithton, or a trunk line from New York to Philadelphia, provided that there were satisfactory earnings which could be maintained and increased indefinitely, and if the financial management and support was all that could be desired.

However, to show satisfactory dependable earnings, the rails must usually be, except for some branches or short lines, sufficiently heavy to admit heavy freight and fast passenger traffic. Spikes will not hold the rails tight to poor ties, and loose rails result in the necessity of slow light traffic or disaster. The road must also be well ballasted if it is to admit dividend producing traffic—large freight train loads and safe, swift passenger traffic. The equipment should be modern and well maintained if there is to be competition with other roads. In the railroad business, as well as in other forms of industry, it pays to keep everything up to the highest standard of efficiency. "A stitch in time saves nine" is a homely but sometimes a very applicable saying.

As to location, there must be sufficient traffic originating within the territory covered by the road or else there must be enough received from connecting lines to justify its operation.

IN making investments in companies or corporations formed to launch new inventions, do not be influenced by the fact that the invention is useful and much needed. This is a secondary consideration.

For while it is true that only a useful invention or appliance can at last succeed, yet the further fact remains that because it is good is no sign it will go. It will not necessarily succeed any more than moral virtue and spiritual beauty will increase in popularity next year at Atlantic City.

Good things go only when captained by big men. It is a question of generalship or salesmanship Sheldon would say, and Sheldon is right. It is a matter of marketing your wares.

The superior man is not the one who thinks great thoughts, but he who expresses them so as to give humanity a "vibe." Success is voltage under control.

So to the argument: Excellent inventions, and mines with pay-gravel are nil and nit and mox nix ouse, until a man with phosphorescent oxaline in his ego takes the management and transforms chaos into cosmos.

We all see big pictures in our cosmic mirror, when drunk on art, love, dope or religion, but the fellow who puts his picture on the canvas and sells it to Pierpont Morgan—he is the only one who is really It.

So when you tell me of your wonderful invention and want to sell me stock in your company, just bring me a snap-shot of the man who is going to manage your concern, as well as a list of what he eats and drinks, the hours he sleeps, and how he exercises both his body and sky-piece.

Then I'll talk with you about taking stock. ELBERT HUBBARD.

Markets and Thermometers

EVER think how much the market is like a thermometer?

In a bull market things range from 70 to 105, with plenty of slumps and rallies in between, but prices stay around that level till "Fall," when there is a gradual decline to 60, 50, 40.

Then there's a cold snap—a quick slump to 30, 20, 10, almost to zero, and things hang about the freezing point for a few months.

In the spring we have a steady recovery, and shortly we observe that they're back at the old level.

Stupid Us! We thought it was never going to grow warm again—thought the esquimaux outfit was the swell thing and come to stay, when what we now need is a straw hat and palm leaf.

These breaks and booms are as recurrent as the seasons. We have only to wait for them to come around.

Trouble is, the perennial bulls want it always summer and take a year's lease on the shady spot in a leafy dell, where they stick till they're frozen out.

And the bears often make their big run for the southland just in time to find that there has been a heavy frost and the peach crop is consequently ruined.

Now, the most of us realize that when it is summer it is going to be winter and vice versa; therefore, we should lay our plans for a big slump or rally in either the market or the thermometer.

When the first cold snap arrives, it does not generally find us without coal in the cellar; we laid in our supply during the summer months, when prices were low; our fuel was then ready when required. If we know we have got to move on May 1st, we don't wait until April 30th before looking up a house.

So the whole argument comes down to a careful conclusion as to what sort of weather and markets we are going to have in the future. Our pipes should be laid accordingly.

After every panic there is a boom and after every boom a panic. People who get in or out on these extreme points are those who make the biggest money in the market.

If the thermometer registers 20 and you are betting on the future temperature, would you not be more certain to win if you take the stand that some day it will reach 95, than by wagering each day what the next would show? That is all there is to this long-swing proposition. Most of the money that is lost in the Street belongs to those who do a lot of monkeying in between. There are just as many different kinds of markets as there are kinds of weather, and as many influences are at work to produce an unexpected change of temperature to-morrow as there are factors which raise and lower to-morrow's level of prices.

We have been studying this problem of money making in Wall Street for a considerable time, and so far it looks as though the great successes were made by two classes:

First: Those who follow the ticker continuously and reduce tape reading or floor trading to a science.

Second: Those who operate for the long pull.

The great army of losers is largely composed of those who try to guess the daily fluctuations without plan, method or reasoning. When things are rushing up, they rush up after them; on the down grade they tumble over each other to sell out at the bottom.

I know of a woman who buys her furs in the spring and her summer garments in the fall, 'cause no one wants 'em then and they're cheap. If she ever comes down to Wall Street she'll take away a certified check consisting of a dollar mark, a figure and a lot of "oodles."

Moral: Buy when they're freezin' and sell when they're swelterin'.

Corporate Capitalization and Profits

From "Opportunity"

ONE of the most important subjects for the public to discuss and determine, in relation to public service corporations, is the extent to which these corporations shall be allowed to capitalize themselves and the profits or net earnings they shall be allowed to make on their capitalization.

It is recognized by all interests, financial, commercial and political, that government control should be exercised over quasi-public corporations and that there should be a limit to which such corporations may go in their capitalization and in charging for their service.

No general rule has ever been adopted, however, as to the extent to which corporations may be capitalized, nor has there been any uniform opinion as to the percentage of profits which these corporations may properly make out of their enterprises.

A syndicate which might put $1,000,000 we will say, into a new railroad enterprise, or other public service corporation, would ordinarily issue $1,000,000 of five per cent bonds, covering the cost of the property, and also the same amount, par value, of stock; it would employ the hardest working and most capable engineers and business men to build up and develop the territory which it would cover, and upon their extraordinary efforts would depend the profits made; if no profits were made, the stock issued to the syndicate would be of no value; if the enterprise was successful, the stock would gradually become valuable and in this way the syndicate would make its profits over and above the regular interest on the bonds.

There is no doubt that the investors who develop these public utilities are entitled to a reasonable profit over and above the regular interest rate paid on bonds representing the cost of the property, and it seems that inducements should be held out for the development of these enterprises, which do so much for public benefit, by agreeing that these corporations may charge for the service which they give a sufficient price to net them at least 10 per cent on the actual cash invested in the properties, after having paid all maintenance and operating expenses and providing for a proper depreciation account, and that this profit may be distributed, first, to interest on bonds or guaranteed interest on stock equal to the cost of the property, and, second, the balance may be distributed to certificates issued by the company without actual value received.

The policy of issuing stock certificates stamped as "full paid and nonassessable, par value $100," without having received cash payment or property payment to its face value, is unfair and unlawful and should be forbidden.

A form of certificate might be used, however, which will state that it has been issued without value but that the holder of it shall participate in the net profits of the corporation, and in case of dissolution he shall participate in the equities, after the debts and liabilities are paid off, and any regularly issued stock is also paid in full.

A certificate of this kind would be of value only in the amount of equities in the property or in the amount of dividends paid, and should be limited in number to one certificate for each $100.00 bond and each $100.00 par value of stock issued and outstanding.

An investor purchasing such a certificate would know it had been issued without value and represented only the indefinite one of its participation in profits and equities in the property of the corporation, and he would be making his investment with full knowledge as to it.

A certificate of this kind would not interfere with a corporation issuing regular stock certificates for cash, to the par value of stock so issued, and

only such stock would be entitled to vote in the affairs of the corporation. The certificate issued without cost and as a bonus should vote in the affairs of the corporation only to the extent of the surplus which might be set aside, from time to time, by the corporation, and in which the bonus certificate would be entitled to participate. If, for instance, a corporation issuing such a bonus certificate should set aside a surplus equal to, we will say, one-tenth of the amount of bonds and actual stock certificates outstanding, then these bonus certificates would be entitled to one-tenth of one vote for each certificate issued, and as the surplus increased the voting power of the bonus certificate would correspondingly increase.

The suggestion is, therefore, made that a legislative act be passed in New York State permitting a corporation to issue a profit-participating certificate, restricted along these lines, as an inducement to capital to take up the new enterprises so necessary to the public welfare, and, further, that the Legislature pass an enactment limiting the charge which the public service corporation may make to the public for its service to an amount sufficient to pay the proper maintenance and operating expenses, allow for the necessary depreciation on the property, and earn and pay 10 per cent net on its actual cost.

This 10 per cent may be divided by the corporation as it sees fit, but that amount of profit should be allowed to capital interesting itself in institutions of this kind and taking its chance of loss.

The state, through its proper officers, or commissioners, should have the privilege of examining the books of the corporation at stated intervals, to determine the amount of gross and net profits, and when the net profits exceed 10 per cent, the price of service which the corporation sells to the public should be reduced to equal that percentage.

A plan of this kind would deal fairly by the original investor, in giving him an opportunity to capitalize his abilities in building up new public service corporations, and it would protect the subsequent investor in his purchase of these certificates. The definite amount of profit which the public agrees to concede to the corporation will remove the continual discussions as to value and prices of the service of public utility corporations.

Figures submitted by M. Leroy Beaulieu and other statisticians at the end of the year regarding the wonderful wealth of the French people demonstrate the imposing strength of France's financial position and her right to the title of "the World's Banker." France's fortune is growing steadily as the result of an annual saving of $1,000,000,000, much of which must seek investment abroad.

M. Leroy Beaulieu's figures show that France now receives $360,000,000 as an annual income from foreign holdings, which are principally government stocks, the amount having been almost doubled in the last fifteen years. He estimates the present wealth of the French people at $45,000,000,000, or more than $1,100 for every man, woman and child, and as the estimate is based upon declared succession taxes, it is admittedly much below the real figures.

In addition M. Leroy Beaulieu takes no account of the vast amount of gold and securities which the French, especially the peasants, keep in concealment and which probably rivals the hidden treasures of India.

The price of copper may be reasonably watched as a hint at what the most powerful group of speculators is doing on the Stock Exchange.

Men seem to live in the future rather than in the present; not that they fail to work while it is called to-day, but that they see the country not merely as it is, but as it will be—twenty, fifty, a hundred years hence, when the seedlings shall have grown to forest trees.

Facts About Coal

and Coal Securities

By George H. Huber

WHEN I say the best security in all the world, I mean coal in the ground, and I will prove to you that this is the best security in the world. If you will think a minute just what coal means, I will not have to do much talking.

You know, of course, when there is a strike in the coal mines the price of coal goes up, but when you realize for a minute what would happen if the production of coal were to stop completely, you would know what coal really means to you.

Coal is the very basis of manufacturing and commercial life; more than that, it is the basis of our entire civilization. It is more stable than real estate; more necessary than iron, steel or lumber, more valuable than gold itself. A bond that is a first mortgage on a well-located coal property is as sound as a government security and more desirable from an interest viewpoint.

Do you realize that almost everything goes back to the coal pile?

Do you realize that when you turn on the switch of an electric light, you are burning coal?

Do you know that when you touch a match to the gas jet somebody is shoveling coal into a furnace to make up for what you burn?

Do you know that when you ride on a trolley car, or on a steamboat, or on a railroad train, you are burning coal?

Do you know that when you go up in an elevator you are consuming coal?

Do you know that practically every bit of food you eat is dependent on coal?

Do you realize that this wonderful age of steel and iron would be impossible without coal?

Do you know of any other mineral or commercial product that is similarly indispensable?

The present progress in civilization of the world, present methods of doing business, present forms of living, would be absolutely and totally impossible if the supply of coal were to fail.

An entire stoppage of the supply of coal in this country for one year would starve more people to death than have been killed in the wars of the world for the last half century.

If you controlled the coal supply, you would control the world. If you had a mortgage on the coal supply, you would practically have a mortgage on the whole earth.

If you have a mortgage on a part of the coal supply, you have a security which is not only absolute, but which grows in value every year, without effort on your part. The coal measures are being rapidly exhausted and will never be replenished.

Coal cannot spoil, and cannot evaporate. Its value is not dependent on the success of any one enterprise. It is more stable than city real estate.

A coal bond is intrinsically better than a government bond, because a stoppage of the supply of coal would make the government bond worthless. A stoppage of the supply of coal would put every railroad and transportation company into bankruptcy.

A debt of honor is usually not.

Speculation as a Business

By S. V. White

In Thomas Gibson's Market Letter

IF one sits down to the bare mathematics of a thing, and supposes that the operator is coming with ten or fifteen per cent. margin to accept tips to buy here, and chip out there, the view must necessarily be pessimistic in regard to any man who adopts that business and undertakes to make even a livelihood out of it. Taking the pessimistic view, and stating it from a standpoint, first, the percentage paid, $25 commission is of itself 5% loss taken out of a profit even of $500 on a single 100 shares of stock. If there is a loss of $100, the $25 commission adds 25% to the loss, so that abstracting from profits and adding to losses, with the accidents of trading, and the bias which the nervous system gives to a man's mind under stress, would leave but little hope that the operator would survive trading many months, to say nothing about years, on a limited capital, such as is spoken of.

But buying on a margin is no different in stocks, if it is conducted on business principles, from the buying of real estate on partial payments. A man buying a piece of realty contracts to pay for it one-quarter down and the balance in one, two and three years' time, with interest to be added. He has bought that $5,000 worth of real estate on a $1,250 margin, or a 25% margin.

Now, the mistake is not in buying either one on a margin, but with stocks fluctuating as rapidly as the prices do, and the strenuous calls being made by the commission broker who is carrying the stock for margin to amply protect himself, the 25% margin is not the equivalent of 25% margin on real estate, where the movements are slower, less wearing on the nervous system, and where there are no additional calls for margin after once the contract is made. So that, if a man will come into the market and buy with from 50 per cent. to 75 per cent. margin to protect his trades, and then if he buys with the same judgment as to values, which are even more easily obtained in regard to stocks than are the values of real estate, the business is quite as legitimate and more frequently attended with profits, than the buying of real estate.

* * *

In times past, the man who has never allowed himself to be cramped for margins could take hold of very desperate appearing propositions, and by patience find that his goods were taken at much higher prices than he had paid for them, not by "suckers," but by financiers of the best judgment in the whole country.

It is not a great many years ago since a broker of large wealth was so crippled that he had to close out his transactions at the very lowest prices when Northwestern common, of which he was largely long, broke from 42 down to 16 in 24 hours; but that same Northwestern common has since sold at 250 and is now selling at 175 or better. It is not many years since D., L. & W. was selling under 40, and it was then paying 7 per cent. dividends, and having never defaulted upon those dividends, and still greater ones, is now selling for more than 540. A margin of 50 per cent. would have held intact the stock bought under 40 in the one case, or at 16 in the other, until all these tremendous prices had developed with the growth of the country, which in its richness and greatness could undo any temporary mistake of judgment and fulfill the wildest dreams of prosperity.

* * *

A most important rule governing speculation should be observed, even if a man has abundant margins—not to take on too great an assortment of stocks at the same time. A man having learned what he ought to expect from studies of the properties, should nevertheless realize that he cannot watch as a stock speculation ought to be watched, interests entirely diverse, and from which

diversity a part of his holdings are liable to be influenced to the detriment of his whole account, whereas if he were trading in those same securities alone, he could give them the necessary time and attention to bring success out of what might seem to be an unexpected and annoying prospective loss. Not too many irons in the fire is as good a maxim for an operator in the stock market as in the blacksmith shop.

* * *

Men should have studied values until they can feel confidence in the actual, or the prospective earning capacities of properties in which they are about to deal. Without this, it would be blind plunging only to trade in the market, following points, and without any sheet anchor upon which they could depend, so far as actual values are concerned.

They should learn to take a large view of the business of the country and of the commercial world at large.

They should have fair estimates of the prospective balances of trade, because there comes a point when the shipment of gold which may be due on balances to other countries will make a tremendous difference in the ability to carry stocks and to successfully make a profit on a speculative movement.

They should study the ability of the communities of this country to utilize any necessities and luxuries to the full extent to which the American people are inclined to indulge, as upon such normal and actual expenditures of the masses of the people will depend the profits of manufacturers and of transportation companies.

They should remember the immense aggregations of wealth in the hands of a few people who may, and very often do, combine their operations for colossal movements.

They should remember that the art of running may be utilized for the success of a battle as well in beating a retreat, as in the charge against the enemy's batteries, and a man who is to finally succeed as a speculator will not be one who doggedly takes a position, even if well chosen, and as against accidents in business, calamities and catastrophes, holds it in the face of those things which could not be foreseen in the commencement of a transaction, without changing from a position fraught with danger; even through a temporary loss.

The World's Progress

IF you want to read an interesting book regarding Wall Street, a good deal on the line of a fairy tale, but instructive nevertheless, we would recommend the "Kidnapped Millionaires," by Frederick U. Adams.

The story is one of a wealthy newspaper man with a weakness for sensational news stories. He is a very original and unique character, and his kidnapping six millionaires, under whose thin disguise we see Morgan, Rockefeller, Harriman, Sage, Keene and Carnegie, is the master stroke of his career.

Interesting the magnates in a scheme for the consolidation of the leading newspapers of great American cities, he induces them to meet him on his private yacht, which is anchored off the Battery. A sumptuous dinner is spread in the cabin, during which the yacht weighs anchor and glides down the bay. By the time dinner and cigars are finished and the company are ready to return they suddenly discover that the yacht is far out to sea and that they are kidnapped.

The hero (?) stands to make a tremendous profit, having gone short of an enormous line of stocks just before the close that day. When the Stock Exchange opens next morning, whisperings of the disappearance of six prominent financiers develop into a threatened calamity. The market breaks heavily. On the following morning, no trace having been found of the missing ones, a panic ensues, banks fail and chaos reigns. In the midst of the panic, brokers supposed to represent the adventurer cover his line of shorts and take on an equally heavy line of long stocks.

Next morning the families of all the financiers receive letters from various points, stating that they are alive and well, but are compelled to be absent for several weeks. The market then rallies and the schemer clears up about $35,000,000.

Bottled up on a small island in the Gulf of Mexico, the magnates, surrounded by every comfort, take turns at doing cooking and doing chores. In the midst of many adventures and incidents they find ample time to discuss finance and economics. Many of their conversations furnish food for thought, among them the following impressive picture of the World's Progress during the last half of the nineteenth century:

"We do not comprehend the age in which it is our good fortune to live. It is the tropical age of progress. It will be hundreds of years before the historian appears who will put into language the record of this half century. We have no perspective; no unobstructed view-point. Our eyes are blinded by the light which burst from the gloom of the dark ages. All ages were dark but the present.

"If we could watch the procession of these centuries pass before us in review, how marvelous by contrast would be the appearance of the nineteenth century? Think of it! For six thousand years of recorded history the map of the world was unknown to its millions of inhabitants! For sixty centuries, swarming millions lived on continents in absolute ignorance that other millions were on the same small globe. One hundred years ago the coast of California had not been explored. The men who framed the Constitution of the United States did not know the course of the Mississippi River. When the Declaration of Independence was penned there were no railroads, telegraphs or telephones. There were no coal mines, no iron, steel, glass, cotton, gas, matches, clocks, gold or silver, copper or lead produced in this country. There was no sugar or coffee. There were no canals or steamships. Printing was in its infancy. Few living had read a book and there were no libraries. There was no city of 50,000 population. There were no trusts and no millionaires. There were no inventors and no machinery.

"It seems incredible, but these are facts. As late as 1864, with the cen-

tury two-thirds gone, steel was almost unknown. In 1873 the United States produced less than 200,000 tons of steel. To-day we produce more than 12,000,000 tons. Industrial history has nothing comparable with this. Think of a civilization without steel!

"The nineteenth century was not the heir to the wisdom of the ages. It came as a giant who disdained and refused to accept the gifts of the past. It tore aside the screen of ignorance and plundered the future of its heritage of wealth and knowledge. Invention was born and machinery followed. It was not until the middle of the century that our existing civilization had its inception. Since that time our progress has been so rapid that our view of passing events has been blurred. If we cannot comprehend the past, how much more difficult is it to understand the present! Our ancient landmarks are swept away. It is interesting to watch some of our modern philosophers and social students in their attempt to comprehend the problems of to-day. Their eyes are glued to the musty tomes of the past; their minds are warped by precedents which they believe must be followed, and they make sad but earnest attempts to measure the things of to-day with the ancient footrule, and to rule the quick by the traditions and superstitions of the dead. They quote us laws framed by savages for the government of savages, and weep because To-day will have none of them. They marvel that cobwebs do not bind this Gulliver to the ground from which he sprang. They cannot realize there is no past; the Present *is*."

Non-Interest-Bearing Bonds

By William Bradford Dubois

THE whole system of issuing interest-bearing bonds by nations, states, counties and municipalities is, in my opinion, most unwise, most unjust, most absurd, stupid and iniquitous. It is entirely unworthy of a people claiming to be civilized or advanced, and would be really laughable if it were not so serious.

It is undemocratic, recognizing and helping to maintain a privileged money lending class, contrary to the fundamental principles of democracy, which are "equal rights, equal burdens, equal privileges under the law." If we were living in a real democratic republic, we would go to the people—that is, to the men and women, the banks and bankers, the corporations and institutions that own, hold or control moneys or credits, and call upon them to contribute their pro rata share of the financial cost of government and public works, instead of borrowing their moneys or credits and paying them interest for their use. That would be democracy. The bonding, borrowing system is plutocracy, and it matters not whether the plutocrat happens to be a multi-millionaire or an humble savings bank depositor, the principle is the same.

The only honest way to issue bonds is to make them in small denominations, bearing no interest, and paying them out for salaries, labor and materials. This has been repeatedly and successfully done, notably by the cities of St. Joseph and St. Louis, Mo., and in the famous Guernsey Market House experiment. Such small bonds should also be receivable, at least in part, for taxes, assessments and water rents. In addition to this, every city should have a municipal bank or clearing house, where the citizens could deposit such bonds and any other moneys or credits they might choose, and draw checks against them. Such a bank or clearing house existed in Venice for over six hundred years. Its funds, which rose to a premium as high as thirty per

cent. over the current coins, consisted entirely of credits entered on the books of the bank. "To comprehend this extraordinary fact," says Colwell, "of credit on the books of a bank, with no money in its vaults, it having been for hundreds of years at a high premium over gold and silver, we need only remember that these credits were the funds in which debts were chiefly paid and that Venice was the clearing house of the world."

The Guernsey Market plan above referred to may be found in a work by Jonathan Duncan, entitled "The Bank Charter Act," published in London in 1857, and is as follows:

"Daniel de Lisle Brock, Governor of Guernsey, was waited upon by a deputation of the principal townsmen of St. Peters, who requested his countenance and assistance toward the erection of a covered market, much wanted in that town. The Governor readily consented, and asked in what way he could assist them most effectually. He was told that the principal difficulty was to raise the required funds. The Governor replied that if that was the only difficulty, he thought he could surmount it, but would ask first if they had the requisite stores of brick, timber, granite and flags, but, above all, had they the skilled artisans and laborers required for the building of the market? They replied that there was no want of labor or materials, that their difficulty was chiefly financial. 'Oh,' said the Governor, 'if that is all you want, I will, as Governor, sign, stamp, declare legal tender and issue five thousand one-pound market notes. With these, pay for materials and wages. Go to work and build your market.' The market was commenced. The first effects were to animate trade by the additional circulation for payment for slates, bricks, etc., and to increase the customs of the shops by the expenditures of the workmen employed on the market. In process of time the market was finished, stall rents became due and were paid in these notes. When the notes all came in, the Governor collected them, and at the head of a procession, with some little form and ceremony, he proceeded to the town cross and publicly burned them in the way of cancelment."

This is a very important lesson in the true principles of finance, and the wonder is that mankind has not been wise enough to learn it and apply it oftener. When money is needed and it is inexpedient or impossible to raise it by taxation, it is the only honest method of procedure. All money or finance is, in last analysis, entirely a matter of credit. Credit implies debit; in fact, wherever there is credit there must be debit, and vice versa. One cannot exist without the other. When we have debit and credit, we have account keeping or bookkeeping. Our present bonding system is a false and crooked system of bookkeeping which robs the toiling masses of the people for the benefit of money lenders. The enormous sums paid annually to the banking and money lending class for interest upon public bonded indebtedness constitute a most insidious and dangerous form of graft—legalized graft, "honest graft," if you will, but nevertheless graft, which must some day be abolished if we are to continue in the path of progress.

INQUIRIES

What do you wish to know about trading or investing in securities or commodities?

Is it something regarding opening an account, margins, commissions, stop orders or other kinds of orders?

In fact, is there any point in connection with the science, methods or customs of the various markets which you would like to have elucidated?

If so, write us questions briefly and they will be answered in this column or otherwise. If personal reply desired, enclose stamped envelope. Address Inquiry Department.

WE DO NOT GIVE ADVICE OR OPINIONS UPON SECURITIES OR PROBABLE MARKET MOVEMENTS.

EDITOR of THE TICKER:

Dear Sir: This is my story, and I desire to have you tell me if I am "on the right track":

I am a young mechanic. Two years ago I was induced to come to New York and take a place as chauffeur with a wealthy man. I started with a salary of $100 per month and now receive a weekly wage amounting to over $1,800 per year. The work is not what I desire to follow all my life, but consider it a stepping stone to something better.

Last summer I became interested in stocks, and bought four shares of Steel preferred. I buy on "dips" and sell on "bulges," and my last sale was seventeen shares. I have made some money. I pay cash for everything I buy and haven't lost anything. I keep a daily record of the leading railway stocks and a few industrials. I am making an extensive study of the business—absorbing everything I consider of value, the factors that move the market, money and business conditions, earning power of the railroads and industrials, etc.

Later on, when I give up my present work, I may start to trade on margin, and this is the outline: To begin with, ten-share lots (if I can locate such a firm), and with nothing less than 20 per cent. margin, the use of stop-loss orders of two points, or according to the trend, more or less. In short, I desire to begin at the very bottom and learn the business, and in time may be able to see more clearly how to enlarge my trades with greater safety. I expect to have losses, but if they are somewhat less than my profits I shall be satisfied. I intend to devote my entire time during business hours to the reading of the tape, and the rest of my spare time in trying to overcome my numerous errors, which will be sure to "crop up" like stones on a meadow. I am from the country, by the way, with no bad habits and some "push," and if I am successful, that will be another story.

Please find enclosed money order in payment of the following books:

"Investments—What and When to Buy."

"How Money Is Made in Security Investments."

F. W. G.

Answer: There is only one thing we can say to you, and that is that you are on the right track. If you follow your present plan there is no reason why you should not make money trading in stocks. Let us hear from you occasionally, stating what progress you are making.

Assessment on Stock

Q.—If a broker is carrying a stock on margin that is subjected to an assessment, is it customary for him to call upon his client for the full amount of said assessment, or would he pay this assessment and call upon his client for additional margin?

Immediately after a stock has been assessed does it usually advance the amount of the assessment?

If the holder refuses to pay the assessment is there any law compelling him to do so? Can an assessment be made on the stock of a corporation without said corporation first being in the hands of receivers?

A.—It is customary for the broker to inquire whether you wish to pay the assessment or not. In case you do, he will make the payment for you and charge your account. If it is a 5 per cent assessment the stock will sell, with the assessment paid, at 5 per cent higher than it did before, hence the client is not called upon to put up any additional margin, unless after the payment the stock declines in market value. If the holder of a stock which is being assessed refuses to pay, there is no law compelling him to do so. The old company's assets are usually sold out to a new corporation formed for the purpose of continuing the business. If the assessment is not paid the old stock is likely to become worthless, the company having relinquished all of its property under foreclosure sale. If a stock is "full paid and non-assessable," no assessment can be levied upon that issue. The formation of a new company requiring participants to pay so much per share in order to enjoy the benefits of the new corporation, amounts to practically the same thing however.

Frequently, stocks are issued with $100 par value and only $25 paid in. These, of course, are liable to be assessed in instalments up to the remaining 75 per cent. Metropolitan securities was one of these. Experience proves that it is best to pay the assessment and participate in the benefits of the new corporation.

Figuring Values

Q.—I should be pleased to have you advise me which is best publication for working out your "Method of Forecasting the Stock Market" as in volume 1. Please give me the method of getting at the figures of the following stocks, viz.: Am. Car & Foundry com., Am. Locomotive, Com., Ry. Steel Springs Com. and Tol. St. L. & W., com.

A.—In figuring earnings on par value, Benton's Monthly Quotation Guides contain very complete and convenient tables. Copies of these can be had free from almost any first class brokerage house. The method of getting at the figures was fully explained in volume 1, No. 1, of The Ticker.

Car Foundry common showed a surplus over common dividends of only $28,000 for the six months ending October 31st, hence its earnings were at the rate of a fraction over 2 per cent per annum.

American Locomotive has not published a report since June 30th, 1908, since when it has passed its common dividend. It is, of course, impossible to figure its present status.

As Railway Steel Springs made its last report December 31st, 1907, the same applies. Industrials are unsatisfactory for figuring in this way because of the infrequency and tardiness of their reports.

Toledo, St. Louis & Western for the five months ending November 30th, 1908, earned $50,000 applicable to dividends. This is at the rate of $120,000 per year and is equal to about 1½ per cent on the preferred, hence for this period, the 4 per cent which was paid was not fully earned. Of course the common earned nothing.

Later: December earnings show an improvement.

A Plan of Operation

Q.—In your letter of February 5th you very kindly stated if I formed a definite plan of operation and submitted it to you, you would advise as to its correctness.

I have formed such a plan and that is: On all big breaks to buy stocks outright and hold them until they reach a figure that I can make a good profit, then wait for the next big break and repeat, etc. What do you think of it?

A.—We think very well of your plan and believe it is one of the best for anyone who is not able to make a study of tape reading. We would advise you, however, to buy only half what you want on what is considered a big break, saving the other half of your capital for panics.

Books for Beginners

Q.—Of the books on investment and speculation which you advertise, which is the most valuable for a beginner?

A.—Volumes 1 and 2 of The Ticker are the most valuable books for a beginner. After these the "A B C of Stock Speculation."

Automatic Stops

Q.—In your August issue of The Ticker, p. 189, you gave an example of an automatic stop order, as follows:

"Buy 100 Steel common at — and stop loss at two points gross. Keep stop order two

points below each high point, as the stock advances."

On October 26th last, I placed a stop order on 50 shares Amalgamated Copper at 78, with instructions to vary order as above My brokers replied:

"We presume from your letter that you wish us to keep this stop loss order two points below the highest point the stock may reach from day to day, from this day forward. To illustrate: After the close of each day's business we will, if necessary, raise the stop loss order to a price equal to two points below the high point of that day, if it is a higher point than that previously reached, but will not lower the stop loss order."

Is this a correct interpretation of the order and should such a stop ever be lowered?

A.—An automatic stop order should be raised to correspond with each fractional advance in the price of the stock. If on such an order, Copper went to 80¼ your stop should immediately have been raised to 78¼; at 80⅞ your stop should be 78⅞. Your broker did not carry out your instructions if he simply adjusted the stop at the close of each day's business. Such an order should never be lowered as its object is to conserve the greater part of the profits which may develop. A stop order may be varied as often during each session as the circumstances require.

Odd Lots

Q.—On February 8th, I wired my brokers to buy "at market" 50 shares each of American Locomotive Com. & Ry. Steel Spring Co. They wired me execution of the order the following a. m., (9th) of Am. Loc. at 56⅛ and R. S. S. at 47. I wrote them the following date that the quotations as I got them from two Chicago dailies were for Am. Loc., 56, 56, 55¼, 55½ and Railway Steel Spring, 46⅞, 46⅞, 46⅞, 46⅞, and could not understand if the quotations were correct why I should be charged that extra ⅛ unless it was for an odd lot. Do you think I was treated fairly?

A.—February 9th was a very dull day. Locomotive opened at 56 and Railway Steel Springs at 46⅞. It is quite likely that your broker had to pay 56⅛ and 47 respectively for odd lots of these stocks. It all depends upon the bid and asked price as to how you can buy odd lots of stock. As previously explained, the closest markets are found in stocks such as Union Pacific, Reading and others which are traded in to a very large extent every day. As a stock decreases in activity its market grows wider and the bid and asked prices are sometimes ¼ or ½ per cent apart. The odd lot houses which handle all these transactions sell to your broker at the offered price and buy at the bid price. Your broker probably dealt fairly with you in this transaction.

American Telephone Convertibles

Q.—What advantage is there in buying American Tel. & Tel. conv. 4s at 93, over buying the stock at 125¾?

A.—The advantage of buying convertible bonds in preference to stock was fully set forth in volume 1, numbers 3 and 5. The American Telephone & Telegraph Company's 4 per cent convertible bonds are exchangeable into the common stock of the company and if you buy the bonds at 93, it is equivalent to paying 125¾ for the stock. At this price the bonds yield 4.45 per cent and the stock 6.4 per cent. In case of a panic these bonds, being a direct obligation of the company, will decline very little. The stock may break badly, however. On the other hand, if the stock has a considerable rise, the bonds must follow. It all depends upon whether you are taking a speculative or an investment position as to which is the better purchase. Large profits have been made by those who purchased convertible bonds during times of panic and when the stock subsequently reached high figures they either sold it short against their convertible bonds or made the conversion and sold out their long stock.

Stops on Stock Owned

Q.—Can a stop order be used on a stock which I hold fully paid for?

A.—Certainly. If executed you deliver the stock and get your money. A stop order is an order to sell at the market as soon as a certain price is reached. By its use you can make sure that your paper profits do not disappear.

My Dearest Ticker:

Your Ticker, I will say, is the very best thing of its kind I ever read, and I have read everything from bucket shop sure things all the way up the scale.

Your little magazine is unique, inasmuch as it is honest and does not pander to remorseless high finance thugs who wield a bludgeon in one hand and take your good money with the other. Furthermore, all your advice is sound and helps the speculator against himself. For instance, your article published after the panic on actual earnings of low priced roads was prophetic, instanced by Alton from 8 to 70, Wabash preferred, Denver, etc., and I benefited by same materially. I have been broke three times, and "never again" for mine.

Hereafter I only buy on panics on about 70 per cent. margin (again your suggestion) and keep my little remnant of the long green.

N. E. S.

This Magazine—Its Plans for the Future.

WHEN I was a school boy there stood opposite our school house a couple of portly Irish women, each of whom presided over a basket filled with cakes, candy and other things calculated to coax the pennies from our pockets. These women had a habit of giving to each purchaser of a doughnut a fairly good sized piece of 'lasses taffy, as sort of a free premium.

Of course the taffy that we got for nothing was more highly prized than the doughnut, although the full market price of the latter was one copper cent. Many of us would not have bought doughnuts had it not been for the taffy.

When The TICKER began its work of collecting information designed to aid people in money making, it was necessary to offer certain inducements to prospective subscribers. The publication was unknown, its field a virgin one, and we ourselves did not know how closely we could hit the mark that had been set. We felt certain, however, that if a person could be induced to read twelve consecutive numbers he would either make or save money as a result, or learn how to do so in future.

How well we have succeeded is attested by the hundreds of letters from readers telling how we have benefited them in ideas, knowledge and DOLLARS.

So we feel that what was once a theory is now a fact—we have made money for our people. The TICKER has "made good."

And now that we are acquainted and you see for yourself that the three dollars a year is not an expense, nor a speculation, but an investment, we feel that the doughnut should sell for a cent without the taffy thrown in. In other words, we have decided to discontinue the offering of premiums after April 30, 1909.

If the TICKER is not worth three dollars a year to a person without another volume to boot, it is not worth it with.

But we intend to give you a bigger three dollars' worth from now on. One of the most valuable of the new features will be the Bargain Indicator, which appears on another page. This enables you to select the best and avoid the least promising securities; it shows each issue in comparison with all others; tells whether a stock is improving its position or losing ground. It boils all the railroad reports down to one simple percentage for each and matches that percentage against all others. Nothing in print equals this Indicator for simplicity and potential value.

Other features in course of preparation will prove of especial aid to holders of securities, including those who invest for income or profit, or both.

Beginning with the May issue, newsdealers will not be allowed to return unsold copies; consequently they will order only the number required to fill orders of their regular customers. It is, therefore, necessary to do one of two things if you wish to read The TICKER regularly—place a permanent order with your newsdealer or send us your subscription.

Without doubt the surest way to secure yourself against missing any of the numbers is to subscribe. The articles and inquiries are interdependent. Many are "continued" —the Tape Reading series, for example— and others refer to past issues. By subscribing regularly and filling in any back numbers you will have the "Little Wall Street Schoolmaster" complete.

People may say: If you don't give a premium I don't save anything by buying at the news-stands. That is so, likewise the following: When you buy at the stands you don't save any money; but by subscribing you save yourself a lot of trouble and annoyance, and in case your dealer is not supplied you save getting left.

We take this opportunity of thanking our subscribers and advertisers for their kind support and cooperation. The TICKER is now firmly established as a permanent proposition. There is evidence that it also enjoys both the good will and the respect of that most intelligent class of people who form its clientele.

Richard D. Wyckoff

If you wish to be placed in touch with a responsible house, write THE TICKER, stating whether you are contemplating investment or speculation; what amount you have for investment, or in what size lots you wish to deal.

Also state what large city is located most conveniently to you, or if you have any preference in this regard.

New Publications.

THOMAS GIBSON'S LIBRARY of SPECULATION and INVESTMENT (7 volumes), $5.00 per set.

The Gibson Publishing Company, 15 William street, N. Y.

The seven volumes described below should prove a valuable addition to the library of every business or professional man. They deal with a subject of vital importance in a business-like manner and illuminate corners of the market places which have hitherto been shrouded in mystery. Some of the apparently complex phases of modern finance are clarified and made as simple to the understanding as the proposition that one and one makes two.

The mission of these publications is neither to promote nor curtail speculation, but rather to direct such operations along lines of safety with a resultant elimination of avoidable losses.

Pitfalls of Speculation, by Thomas Gibson, as is suggested by the title, deals with and makes clear some of the dangers attendant upon speculation in securities and commodities and points out the way to avoid a great many of the errors common to the great majority of men who buy and sell with the expectation of making a profit.

Cycles of Speculation, by Thomas Gibson, enters still further into the subject and shows how the element of gambling may be eliminated from speculative operations by a knowledge of the major price movements of the past and a careful study of conditions bearing upon future probabilities.

The Increasing Gold Supply includes within its covers special articles written by competent authorities including Maurice L. Muhlman, Byron W. Holt, Arthur Selwyn-Brown, Professor J. Pease Norton, Charles A. Conant, Alonzo E. Cottier and others. The relation between the production of gold and prices for commodities and securities is discussed in these papers in language free from confusing technical terms. Mr. Gibson's own contribution to this volume shows clearly the value of an intimate knowledge of the Gold Supply in attempting to judge the future course of prices.

The other four volumes of the set, entitled respectively, Thomas Gibson's Market Letters for 1907, Weekly Letters for 1908, Book of Charts and Special Letters for 1908, are worthy of more than passing attention for the reason that their contents illustrate the practicability for every-day use of the theories expounded in the first-named three books. The market letters of 1907 predicted the decline of that year long before it occurred and the letters of 1908 correctly forecasted the ensuing recovery. In both instances the methods employed in gauging these great movements are based entirely on sound economic principles and the logical deductions drawn therefrom.

The Book of Charts is a valuable aid to the student of values as affected by conditions, affording a visual short cut to the deductions obtainable in columns of eye-wearying statistics. The writer has no sympathy with the various chart systems of forecasting prices nor any of the numerous forms of mechanical speculation. According to Mr. Gibson the only speculation worth while is that based on careful study and his contention is that operations for the rise or fall may be made comparatively safe by following intelligent methods.

The Special Letters are especially interesting and instructive, covering a variety of market subjects and written by well-known experts in their particular lines. As a contribution to the campaign of enlightenment, The Library of Speculation and Investment is of great value.

WHEAT FIELDS AND MARKETS OF THE WORLD, by ROLLIN E. SMITH: The Modern Miller Co., publishers.

This work is the outgrowth of many years' experience in the grain markets and a careful gathering of all available material relating to wheat, both in this country and abroad. The argument is largely confined to wheat in its commercial importance rather than its speculative aspects. The various wheat fields throughout the globe are critically examined and their part in feeding the world's population carefully weighed. The numerous exchanges and distributing centers are dealt with at length, and the whole forms a volume which no intelligent operator can afford to dispense with.

LITSON & MAXWELL'S INTEREST TABLES.—These tables are arranged in the most convenient form of any which have yet been issued. By their use accrued interest on bonds paying from 3½ to 6 per cent. can be arrived at in a moment and without figuring.